For Reference
Do Not Take
From the Library

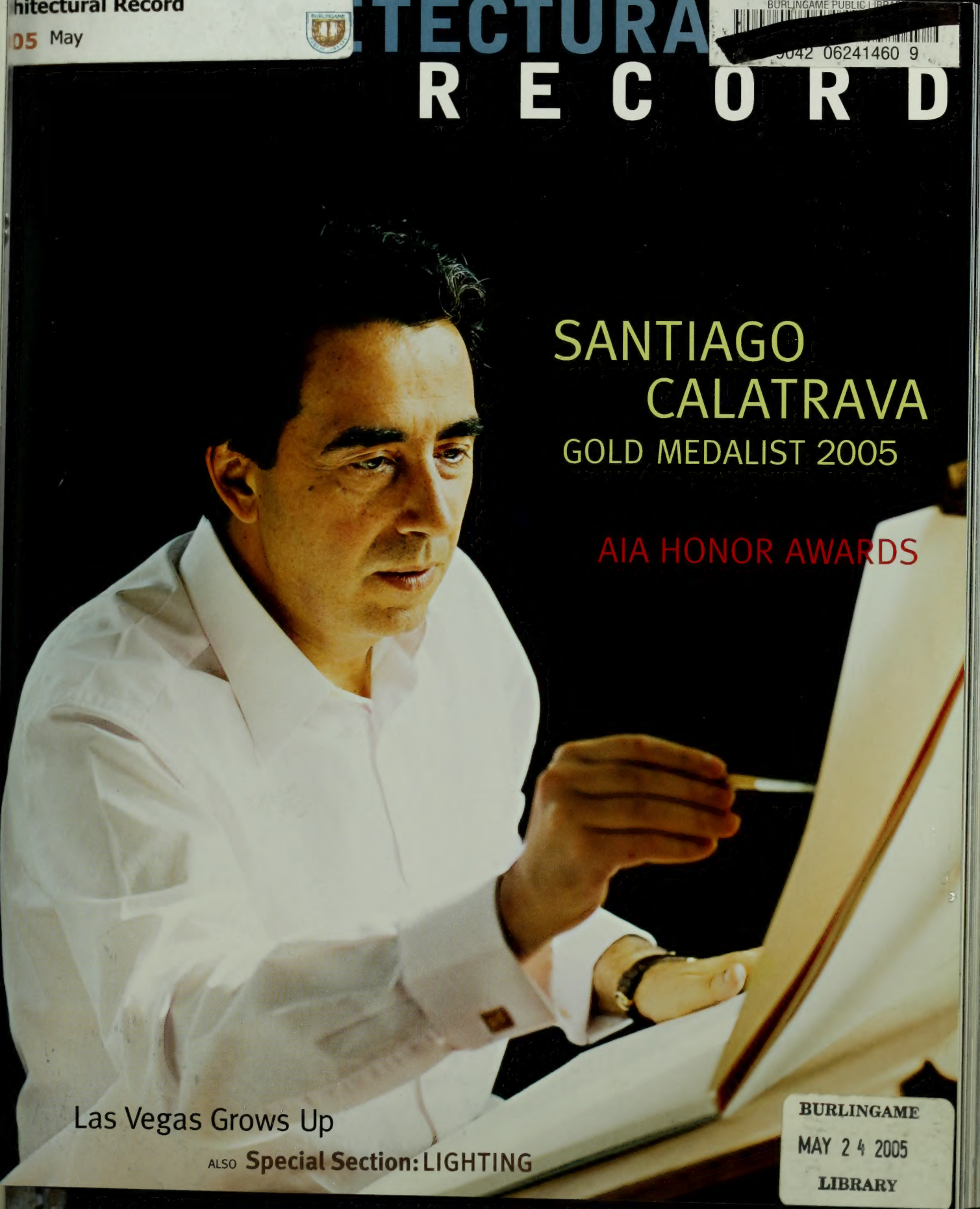
Every person who maliciously cuts, defaces, breaks or injures any book, map, chart, picture, engraving, statue, coin, model, apparatus, or other work of literature, art, mechanics or object of curiosity, deposited in any public library, gallery, museum or collection is guilty of a misdemeanor.

Penal Code of California
1915, Section 623

hitectural Record
05 May

TECTURAL RECORD

BURLINGAME PUBLIC LIBRARY
0042 06241460 9



SANTIAGO CALATRAVA
GOLD MEDALIST 2005

AIA HONOR AWARDS

Las Vegas Grows Up

ALSO **Special Section:** LIGHTING

BURLINGAME
MAY 24 2005
LIBRARY

Techstyle®
ACOUSTICAL CEILINGS



A bright idea.

A clean, monolithic look. An NRC of 0.85. Easy downward access. Form and function. Style and substance. Techstyle® Acoustical Ceilings are sure to make your project shine.



For literature and our email newsletter,
call toll-free 866-556-1235
or visit www.hunterdouglascontract.com

Installation: John and Mary Pappajohn Center
for Higher Education, Des Moines, IA
Architect: Herbert Lewis Kruse Blunck Architecture
4′ x 4′ panels

HunterDouglasContract

CEILINGS

© 2005 Hunter Douglas Inc. ® Trademark of Hunter Douglas Inc.
CIRCLE 147 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS



www.weathershield.com/AR

© 2004 Weather Shield Mfg., Inc.

ometimes, a spectacular finish is the start of a **GREAT DESIGN**.

Shown here: Anodized dark bronze aluminum exterior Weather Shield® casement windows tastefully coordinated with a matching archtop transom unit. This is one of seven anodized colors offered by Weather Shield. Each provides lasting beauty that resists chipping or peeling, even under intense exposure to the sun. For complete sizing and ordering information, call **1-800-477-6808** or visit **weathershield.com/AR**

WEATHER SHIELD
WINDOWS & DOORS
SINCE 1955
®

CIRCLE 1 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Demand better. Compromise nothing. **Want More**™

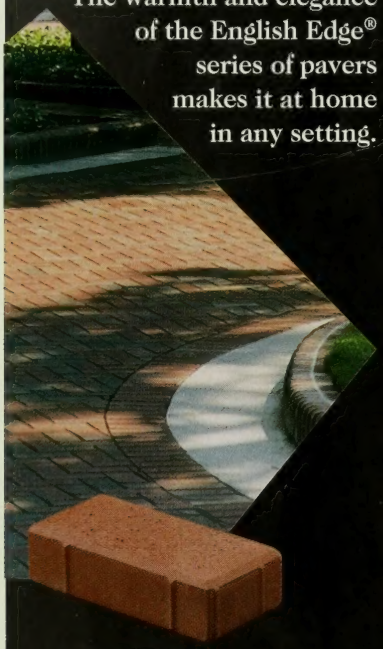
Weather Shield® Premium Windows and Doors

English Edge® Pavers

Classic Elegance and Warmth from

Pine Hall Brick

The warmth and elegance of the English Edge® series of pavers makes it at home in any setting.



Our full line of pavers meets or exceeds ASTM C902 SX Type 1 PX

Call 1-800-334-8689 to talk to one of the trained paving specialists on our staff.

English Edge®
America's Premier Paver™

Clay Genuine Pavers

Pine Hall Brick Co., Inc.
P.O. Box 11044
Winston-Salem, NC 27116-1044

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
MANAGING EDITOR	Beth Broome, *elisabeth_broome@mcgraw-hill.com*
DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
SENIOR EDITORS	Charles Linn, FAIA, *linnc@mcgraw-hill.com*
	Clifford A. Pearson, *pearsonc@mcgraw-hill.com*
	Sarah Amelar, *sarah_amelar@mcgraw-hill.com*
	Sara Hart, *sara_hart@mcgraw-hill.com*
	Deborah Snoonian, P.E., *deborah_snoonian@mcgraw-hill.com*
	William Weathersby, Jr., *bill_weathersby@mcgraw-hill.com*
	Jane F. Kolleeny, *jane_kolleeny@mcgraw-hill.com*
PRODUCTS EDITOR	Rita F. Catinella, *rita_catinella@mcgraw-hill.com*
NEWS EDITOR	Sam Lubell, *sam_lubell@mcgraw-hill.com*
PRODUCTION MANAGER	Juan Ramos, *juan_ramos@mcgraw-hill.com*
DEPUTY ART DIRECTOR	Kristofer E. Rabasca, *kris_rabasca@mcgraw-hill.com*
ASSOCIATE ART DIRECTOR	Clara Huang, *clara_huang@mcgraw-hill.com*
WEB EDITOR	Randi Greenberg, *randi_greenberg@mcgraw-hill.com*
WEB DESIGN	Susannah Shepherd, *susannah_shepherd@mcgraw-hill.com*
WEB PRODUCTION	Laurie Meisel, *laurie_meisel@mcgraw-hill.com*
EDITORIAL SUPPORT	Linda Ransey, *linda_ransey@mcgraw-hill.com*
	Monique Miller, *monique_miller@mcgraw-hill.com*
EDITORIAL ASSISTANTS	Audrey Beaton, *audrey_beaton@mcgraw-hill.com*
	Larissa Babij, *larissa_babij@mcgraw-hill.com*
EDITOR AT LARGE	James S. Russell, AIA, *jamesrussell_editor@earthlink.net*
SPECIAL CORRESPONDENT	Suzanne Stephens, *suzanne_stephens@mcgraw-hill.com*
COPY EDITOR	Leslie Yudell
ILLUSTRATOR	I-Ni Chen
CONTRIBUTING EDITORS	Raul Barreneche, Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Nancy Levinson, Thomas Mellins, Robert Murray, Sheri Olson, FAIA, Nancy B. Solomon, AIA, Michael Sorkin, Michael Speaks, Ingrid Spencer
SPECIAL INTERNATIONAL CORRESPONDENT	Naomi R. Pollock, AIA
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz
GROUP PUBLISHER	James H. McGraw IV, *jay_mcgraw@mcgraw-hill.com*
VP, ASSOCIATE PUBLISHER	Laura Viscusi, *laura_viscusi@mcgraw-hill.com*
VP, MARKETING AND BUSINESS DEVELOPMENT	David Johnson, *dave_johnson@mcgraw-hill.com*
VP, GROUP EDITORIAL DIRECTOR	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
GROUP DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
MANAGER, RESEARCH	Ellen Halfond, *ellen_halfond@mcgraw-hill.com*
DIRECTOR, MARKETING COMMUNICATION	Chris Meyer, *chris_meyer@mcgraw-hill.com*
DIRECTOR, CIRCULATION	Maurice Persiani, *maurice_persiani@mcgraw-hill.com*
	Brian McGann, *brian_mcgann@mcgraw-hill.com*
DIRECTOR, MULTIMEDIA DESIGN & PRODUCTION	Susan Valentini, *susan_valentini@mcgraw-hill.com*
MANAGER, ADVERTISING PRODUCTION	Stephen R. Weiss, *stephen_weiss@mcgraw-hill.com*
DIRECTOR, FINANCE	Ike Chong, *ike_chong@mcgraw-hill.com*
DIRECTOR, SPECIAL PROJECTS	Charles Pinyan, *cpinyan@mcgraw-hill.com*
REPRINTS	Reprint Management Services, *architecturalrecord@reprintbuyer.com*

EDITORIAL OFFICES: 212/904-2594. Editorial fax: 212/904-4256. E-mail: *rivy@mcgraw-hill.com.* Two Penn Plaza, New York, N.Y. 10121-2298. **WEB SITE:** www.architecturalrecord.com. **SUBSCRIBER SERVICE:** 877/876-8093 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087. E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions. 800/242-3837. E-mail: *members@aia.org.* **INQUIRIES AND SUBMISSIONS:** Letters, Robert Ivy; Practice, Charles Linn; Books, Clifford Pearson; Record Houses and Interiors, Sarah Amelar; Products, Rita Catinella; Lighting and Interiors, William Weathersby, Jr.; Residential, Jane F. Kolleeny; Web Editorial, Randi Greenberg.

ARCHITECTURAL RECORD: (ISSN 0003-858X) May 2005. Vol. 193, No. 05. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. 10020. Periodicals postage paid at New York, N.Y. RCSC and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 40012501. Return undeliverable Canadian addresses to: DPGM Ltd., 4960-2 Walker Road, Windsor, ON N9A 6J3. Email: P64ords@mcgraw-hill.com. Registered for GST as The McGraw-Hill Companies. GST No. R123075673. ***Postmaster:*** *Please send address changes to* ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates are as follows: U.S. and Possessions $64; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $9.95; for foreign $11. Subscriber Services: 877/876-8093 (U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087. **SUBMISSIONS:** Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage. **SUBSCRIPTION LIST USAGE:** Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520. **OFFICERS OF THE MCGRAW-HILL COMPANIES:** *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Human Resources:* David L. Murphy. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Kathleen A Corbet, *President, Standard & Poors;* Henry Hirschberg, *President, McGraw-Hill Education;* Scott C. Marden, *President, McGraw-Hill Information and Media Services.* **MCGRAW-HILL CONSTRUCTION:** Norbert W. Young, Jr., FAIA, *President. Vice President and CFO:* Louis J. Finocchiaro. **COPYRIGHT AND REPRINTING:** Title ® reg. in U.S. Patent Office. Copyright © 2005 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC, ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 800/360-5549 X 129 or e-mail architecturalrecord@reprintbuyer.com. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information of for any damages resulting there from.

McGraw-Hill CONSTRUCTION ABC MPA The McGraw-Hill Companies

THE AMERICAN INSTITUTE OF ARCHITECTS 2005 BOARD OF DIRECTORS • OFFICERS: Douglas L. Steidl, FAIA, MRAIC, President; Kate Schwennsen, FAIA, First Vice President; Shannon Kraus, AIA, Vice President; Thomas R. Mathison, FAIA, Vice President; RK Stewart, FAIA, Vice President; John C. Senhauser, FAIA, Secretary; James A. Gatsch, FAIA, Treasurer; Ana Guerra, Associate AIA, Associate Representative to the AIA Executive Committee; Saundra Stevens, Hon. AIA, CACE Representative to the AIA Executive Committee; Norman L. Koonce, FAIA, Executive Vice President/CEO. **• REGIONAL DIRECTORS:** Peter J. Arsenault, AIA, NCARB, LEED AP; Douglas E. Ashe, AIA; Michel C. Ashe, AIA; Ronald J. Battaglia, FAIA; William D. Beyer, FAIA; Michael Broshar, AIA; David J. Brotman, FAIA; Randy Byers, AIA; Tommy Neal Cowan, FAIA; Jacob Day; Jeremy Edmunds, Associate AIA, LEED AP; Glenn H. Fellows, AIA; Robert D. Fincham, AIA; Jonathan L. Fischel, AIA; Marion L. Fowlkes, FAIA; Saul Gonzalez; The Hon. Jeremy Harris, Hon. AIA; John J. Hoffmann, FAIA; William E. Holloway, AIA; Clark Llewellyn, AIA; Marvin J. Malecha, FAIA; Clark D. Manus, FAIA; Linda McCracken-Hunt, AIA; Carl F. Meyer, FAIA; George H. Miller, FAIA; Elizabeth E. Mitchell; Hal P. Munger, AIA; Robin L. Murray, AIA, PP; Celeste A. Novak, AIA, LEED AP; Gordon N. Park, CDS, AIA; David R. Proffitt, AIA; Marshall E. Purnell, FAIA; Miguel A. Rodriguez, AIA; Jerry K. Roller, AIA, NCARB; Jeffrey Rosenblum, AIA; Robert I. Selby, FAIA; Norman Strong, FAIA; Leslie J. Thomas, AIA; J. Benjamin Vargas, AIA; Bryce A. Weigand, FAIA. **• AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, Executive Vice President/CEO; James Dinegar, CAE, Chief Operating Officer; Richard J. James, CPA, Chief Financial Officer; Jay A. Stephens, Esq., General Counsel; Helene Combs Dreiling, FAIA, Team Vice President, AIA Community; Ronald A. Faucheux, PhD, Esq., Team Vice President, AIA Government Advocacy; Barbara Sido, CAE, Team Vice President, AIA Knowledge; Elizabeth Stewart, Esq., Team Vice President, AIA Public Advocacy; David Downey, CAE, Assoc. AIA, Managing Director, AIA Communities by Design; Suzanne Harness, AIA, Esq., Managing Director and Counsel, AIA Contract Documents; Richard L. Hayes, Ph.D., RAIC, AIA, CAE, Managing Director, AIA Knowledge Resources; Brenda Henderson, Hon. AIA, Managing Director, AIA Component Relations; Christine M. Klein, Managing Director, AIA Meetings; Carol Madden, Managing Director, AIA Membership Services; Philip D. O'Neal, Managing Director, AIA Technology; C.D. Pangallo, EdD, Managing Director, AIA Continuing Education; Terence I. Poltrack, Managing Director, AIA Communications; Phil Simon, Managing Director, AIA Marketing and Promotion; Laura Viehmyer, SPHR, CEBS, CAE, Chief Human Resources Officer.

CIRCLE 2 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PRINTED IN USA

It's all in how you frame it.

Sleek, European Fire-Rated Framing from TGP.



Say goodbye to bulky, wrap-around framing. Fireframes® from TGP give you the beauty and performance your design needs.

- *Fire-rated up to 2 hours*
- *Narrow profile steel framing*
- *Available in stainless steel*
- *U.L. listed*
- *Easy to install*
- *Factory finished*

For more information, visit

fireglass.com

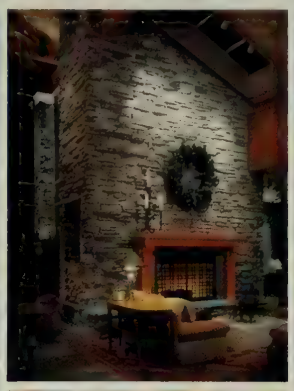
TGP
Technical Glass Products™

1-800-426-0279

CIRCLE 3 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Fireframes is a registered trademark and Technical Glass Products is a trademark of Technical Glass Products. © 2005 Technical Glass Products. All rights reserved.









YOU HAVEN'T BEEN ALLOWED THIS MUCH CREATIVIT



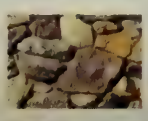
Envision the possibilities with StoneCAD® software StoneCAD® software has everything you need to select, visualize, detail and specify Cultured Stone® products. Detailed installation drawings, full-color tileable textures and hatch patterns needed to render drawings can be viewed, printed, imported and exported into most CAD, 2-D and 3-D programs. There's even a photo gallery tour with hundreds of Cultured Stone® product applications, catalogued by project type for easy reference.

The Cultured Stone® brand offers a wider variety of shapes, textures, sizes and colors than any other brand of manufactured stone veneer.

In other words, no one else gives you as many possibilities. So when you design with Cultured Stone® veneer you're only limited by your imagination. And wherever you use it, the opportunities f adding a unique signature touch and being creative are endless.

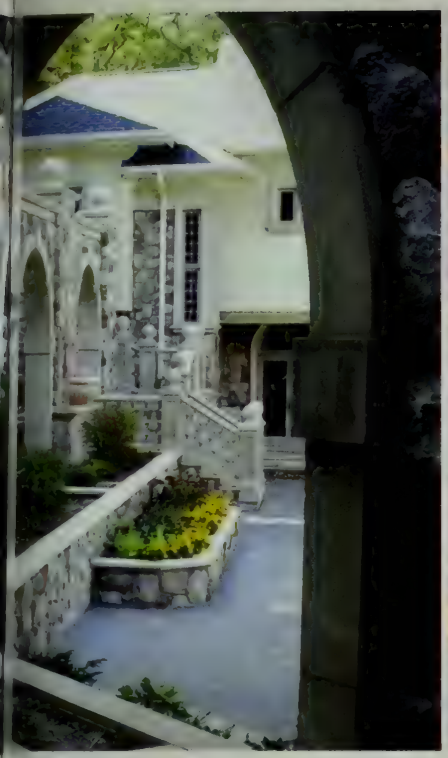
All Cultured Stone® products are available nationally, and for the l six years the Cultured Stone® brand has ranked #1 in builder usa



















INCE YOUR WORK HUNG ON THE FRIDGE.



y more than two to one.* So go ahead, let your imagination run wild nd create an architectural masterpiece with Cultured Stone® veneer.

To find out more about Cultured Stone® products, visit us at www.culturedstone.com or call 1-800-255-1727.



ACOUSTIC
INSULATIO
ROOFING •
MANUFACTURED STONE VENEER •
SIDING



OWENS CORNING®
INNOVATIONS FOR LIVING.™

CIRCLE 4 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

SALT LAKE CITY PUBLIC LIBRARY: Salt Lake City, Utah | ARCHITECT: VCBO Architecture, L.L.C. and Moshe Safdie & Associates Inc. | GLAZING CONTRACTOR: Steel Encounters

GLASS FABRICATOR: Northwestern Industries, Inc. | PRODUCT: *Solarban*® 60 Glass | OWNER/DEVELOPER: Salt Lake City Public Library

LOOKS ARE STILL EVERYTHING.

The goal for Salt Lake City's new main library building was to reflect and engage the city's imagination and aspirations. Achieving this required a sweeping and sunlit design, a desire to embrace the view of the nearby Wasatch Mountains, and a call to a member of the *PPG Certified Fabricator*℠ Program.

Bringing this level of open, compelling design to a public library also brings an elevated concern for UV protection and heating costs – which can complicate a tight schedule. But by specifying one of PPG's high-performance glasses through a *PPG Certified Fabricator*,℠ you get the right glass from a qualified, local supplier – delivered at the right time.

PPG offers a wide range of energy-saving glass products that look great and perform even better. Including *Solarban*® 60 – the solar control low-E glass that's engineered to look like clear, uncoated glass. Or *Sungate*® 500 low-E glass which, when used with spectrally selective tinted glasses, delivers an ideal combination of aesthetics and performance. Call the PPG Solutions Hotline today for samples or the name of a *PPG Certified Fabricator*℠ that's near you: 800-377-5267.



IdeaScapes, Solarban, Sungate and the PPG logo are trademarks and PPG Certified Fabricator is a service mark owned by PPG Industries, Inc.



PPG IdeaScapes

Glass • Coatings • Paint

CIRCLE 5 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PPG Industries, Inc., Glass Technology Center, Guys Run Road, Pittsburgh, PA 15238-1305 www.ppgideascapes.com


Design. Create. Inspire.

Turning heads since 1905 with an eye for custom configuration.

Douglas Fir, Mahogany, 36 exterior clad colors, extraordinary aesthetic plenitude - trillions of variations.

Visit www.loewen.com to download CAD drawings or contact the Loewen Architectural Help Desk for more information.



Discover the world's most inspiring windows and doors. | 1.800.563.9367

CIRCLE 6 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Work the way you think.

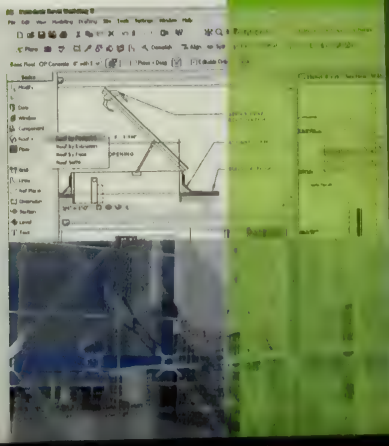
Autodesk

Idea:

Improve an architect's business by providing a more complete way to think about buildings, from design through construction.

Realized:

With Autodesk® Revit® Building software, design teams achieve superior documentation, more effective design coordination, and more productive collaboration. So clients are happier, you get more repeat business, and you're more profitable. Because it's created specifically for building information modeling, designing buildings and your work process with Revit Building can help you realize your ideas to compete and win. See how at autodesk.com/revitbuilding win. See how at autodesk.com/revitbuilding



Autodesk, Revit, Autodesk Revit and the Autodesk logo are registered trademarks or trademarks of Autodesk, Inc., in the U.S.A. and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. ©2006 Autodesk, Inc. All rights reserved.

ARCHITECTURAL RECORD

05.2005



On the Cover: *Santiago Calatrava in his Zurich studio in April 2005. Photograph by Nathan Beck Photography*
Right: *Perimeter Institute. Photograph by Marc Cramer*

News

51 Is Renzo Piano America's default architect?

54 AIA to investigate decline in new licenses

66 On the Boards: Las Vegas

Departments

25 Editorial: It's in the Air*

37 Letters*

83 Correspondent's File: Rome *by Paul Bennett*

91 Exhibitions: Mexico City's new architects *by Sam Lubell*

95 Archrecord2: For the emerging architect *by Randi Greenberg**

101 Books: Star architects and airports

109 Snapshot: Nomadic Museum *by Beth Broome*

355 Dates & Events*

399 Record House of the Month *by William Weathersby, Jr.**

Features

115 AIA Awards Introduction *by Jane F. Kolleeny**
The AIA honors projects selected from more than 630 submissions.

116 Architecture Awards*
Thirteen projects include a sauna and a corporate headquarters.

130 Interior Awards*
A wide range of programs yield innovative solutions.*

146 Urban Design Awards*
Providing open space and maintaining scale are evident priorities.

152 25 Year Award*
Louis I. Kahn's Yale Center for British Art earns the honor.

156 Firm of the Year Award*
Murphy/Jahn brings futuristic vision and high energy to the field.

162 Santiago Calatrava *by Alexander Tzonis**
The architect reveals a passion for building that has led him to create one of today's most notable bodies of work.

176 Philip Johnson: An American Icon*
Three observers of the man and the architect address key issues of his life and his long-spanning career.

186 Las Vegas Gambles on Growth *by James S. Russell, AIA**
High growth and low costs is the city's economic-success formula.

194 What's Left to Learn From Las Vegas *by Clifford A. Pearson**
How a new mentality is affecting a city's built environment.

Projects

202 Knowlton School of Architecture, *Ohio* *by Sara Hart**
Mack Scogin Merrill Elam Architects
A high-profile education program gets the facility it deserves.

210 Perimeter Institute, *Canada* *by Rhys Phillips**
Saucier + Perrotte Architectes
Site-sensitive physics building captures an institute's raison d'etre.

218 Flint RiverQuarium, *Georgia* *by Sarah Amelar**
Antoine Predock Architect
A building akin to a landform showcases local aquatic culture.

224 Hall of Science, *New York* *by Suzanne Stephens**
Polshek Partnership
After 40 long years, World's Fair leftovers get a new life.

* You can find these stories at **www.architecturalrecord.com**, including expanded coverage of Projects, Building Types Studies, and Web-only special features.

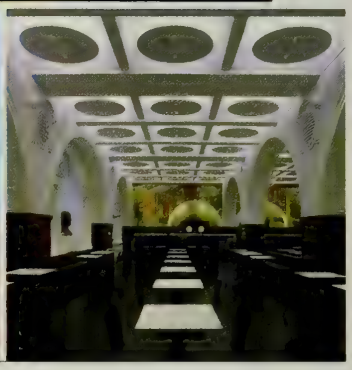
The AIA/ARCHITECTURAL RECORD Continuing-Education Opportunity *is "Born Again: A New Skin Offers a Fresh Start" (page 261).*

05.2005

(Contents continued from previous page)







Bigelow Chapel (top), photograph by Paul Warchol. Royal Academy of Arts Restaurant (bottom right), photograph by Richard Bryant/arcaid.co.uk. Urban wind turbine (bottom left), photograph courtesy Toronto Hydro Energy Services.

Building Types Study 845

235 Sacred Spaces *by Clifford A. Pearson*

236 Bigelow Chapel, *Minnesota* *by Camille LeFevre**
Hammel, Green and Abrahamson
Inspiring worship, a chapel illuminates a midwestern seminary.

242 Leaf Chapel, *Japan* *by Clifford A. Pearson**
Klein-Dytham Architecture
A small wedding chapel marries sacred and commercial interests.

246 Holy Rosary Catholic Church, *Louisiana* *by Robert Ivy, FAIA**
Trahan Architects
Concrete and glass bring parish church into the present day.

252 Seaside Interfaith Chapel, *Florida* *by James S. Russell, AIA**
Merrill and Pastor
To accommodate town's growing beachside service, a chapel is born.

For 6 additional Sacred Spaces projects, go to Building Types Study at ***architecturalrecord.com***.

Architectural Technology

261 Born Again: A New Skin Offers a Fresh Start *by Sara Hart**
Recladding of a city hall is an investigative study of the relationship between architectural design and the life expectancy of materials.

272 A Mighty Wind Is Blowing *by Barbara Knecht**
The wind power industry is robust. Information is abundant. Clean, endless energy has never been at closer reach.

281 Tech Briefs

Lighting

309 Introduction

310 Creative Uses

315 Duvet *by William Weathersby, Jr.**
Andres Escobar & Associe; XS Lighting & Sound
Evocative lighting complements a nightclub's ethereal landscape.

320 Leadership Center at Cedarbrook *by Alice Liao**
Candela
Smart illumination plan alleviates the "trapped in a meeting" feeling.

326 Royal Academy of Arts Restaurant *by Leanne French**
MUMA; DHA Designs
Color-changing effects highlight a restaurant's art and architecture.

331 Lighting Products *Rita Catinella Orrell*

Products

337 Contract Carpet

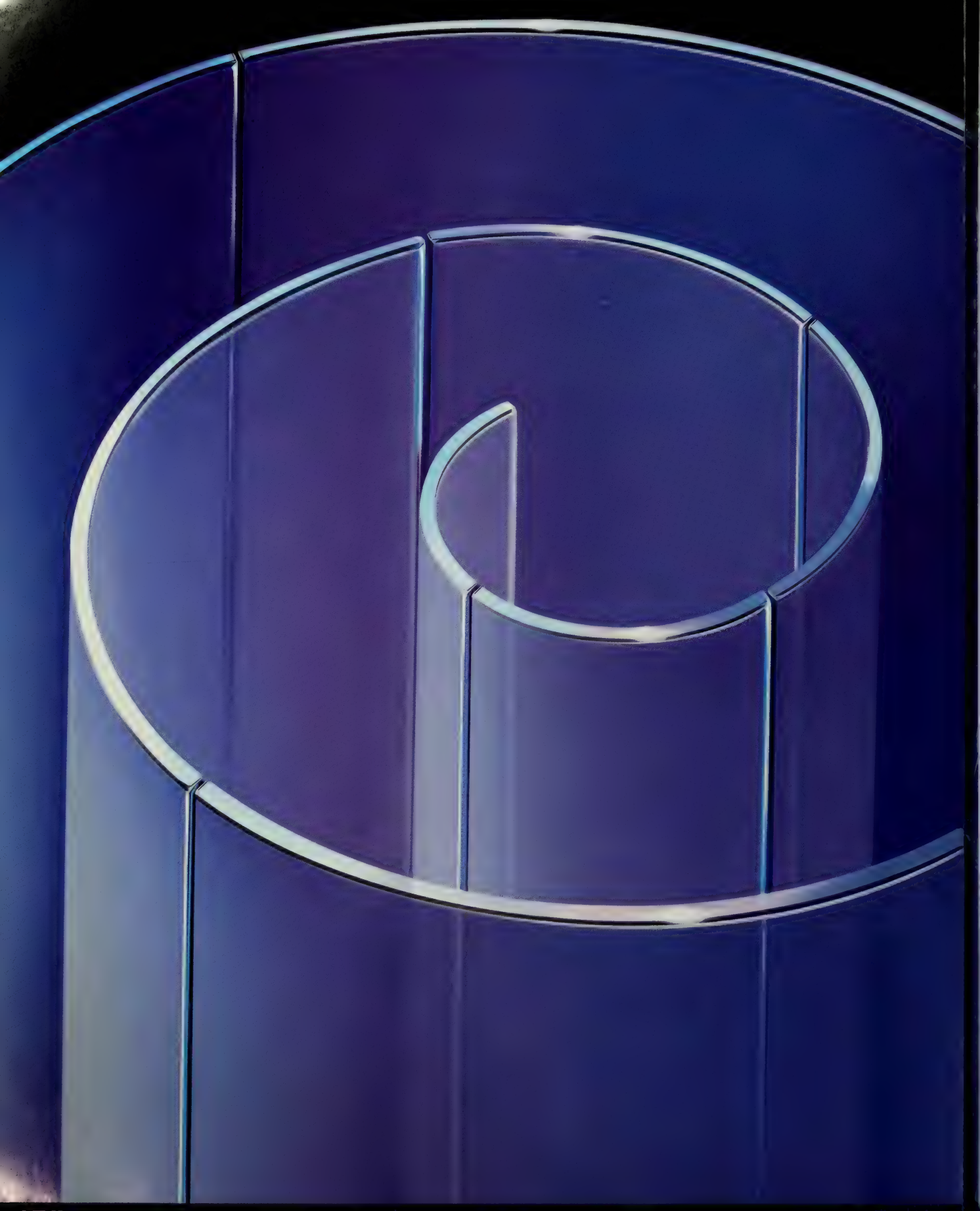
341 Product Briefs

350 Product Literature

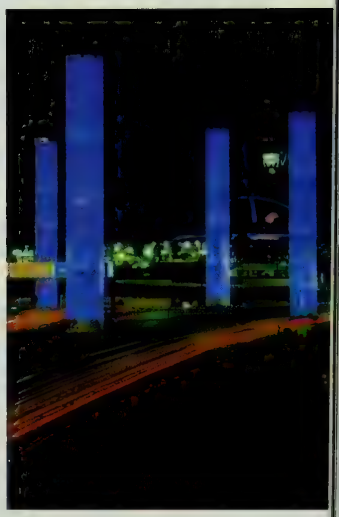
384 Reader Service* **378 AIA/CES Self-Report Form***

AR is the proud recipient of a ***National Magazine Award for General Excellence***


indestructible?
Doors get beat up. In fact, doors take the worst beating of any part of a commercial interior - until now! Introducing the New C/S Acrovyn® Door, designed to take any kind of punishment and continue looking new for years to come. And when it comes to aesthetics, the Acrovyn Door comes in lots of woodgrain finishes and designer colors, so it will fit into any interior. While it may not be indestructible, it's pretty darn close. To find out more, call 800-972-7214 or visit www.c-sgroup.com/door
introducing new cs acrovyn® doors
See us at Booth #3242 AIA Convention
CIRCLE 38 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



bent beyond recognition



The spectacular Glass Cylindrical Light Towers at the LAX Gateway, Los Angeles International Airport designed by Ted Tokio Tanaka Architects, Nadel Architects, Inc. Fabricated by Oldcastle Glass® in Bentemp.

Glass as flexible and nimble as the creative mind? Sure! But this is no ordinary glass–it's **Bentemp,® another Oldcastle Glass® exclusive.** And the process of bending and tempering glass is merely the beginning. By employing the most technologically advanced fabrication processes, we silk-screen, laminate, heat-treat, insulate and even offer structural glass wall systems. We also make blast-resistant glazing systems and more. And these are just the beginning of **the most comprehensive collection of architectural glass products available anywhere.** For free information or to speak with an **experienced, architectural glass specialist,** call **1-866-653-2278** or visit the new **www.oldcastleglass.com**.

Oldcastle Glass® *Where glass becomes architecture™*

CIRCLE 7 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Suits Your Timeline. Su

DAY





DAY 1



DAY 40



DAY 41



DAY 70

Williams Scotsman's **Concurrent Construction™** Process Timeline

TRADITIONAL CONSTRUCTION

DESIGN	ENGINEERING	SITE PREPARATION	CONSTRUCTION

CONCURRENT CONSTRUCTION™ – Nearly Half the Time!

DESIGN	ENGINEERING	SITE PREPARATION	— — — — TIME SAVINGS — — — —
		FABRICATION / CONSTRUCTION	

ur Budget. Suits Your Style.

Permanent Modular Construction can trim months from your schedule, keep your project running in the black and still provide you with near limitless design flexibility. Consider our buildings as the strong bone structure that supports the full scope of your creative masterplan.

Our Concurrent Construction™ process – allowing critical steps in site preparation, building fabrication and installation to occur simultaneously – is a textbook example of efficiency. Off site, your building is fabricated in a tightly monitored and supervised environment that ensures the highest level of quality control. Assembly is accomplished with speed and precision. All of this translates into quicker occupancy and harmonious workflows.

One final consideration: you can be assured your project will benefit from the security, breadth of experience, and financial strength only an industry leader can provide.

Williams Scotsman's permanent modular construction – perfectly suited to the building realities of the 21st century.

SPACE BY

WILLIAMS SCOTSMAN®

PERMANENT MODULAR CONSTRUCTION

866.WS.BUILD

www.willscot.com

CIRCLE 8 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

You can already tell exactly what kind of house it's going to be.



©2005 Marvin Windows and Doors. All rights reserved. ®Registered trademark of Marvin Windows and Doors.





The right windows and doors help bring your plans to life beautifully. Specify Marvin, and you're assured of complete design flexibility and better-performing windows and doors with superior aesthetics. That includes furniture-grade interiors, consistent sight lines and the tightest tolerances possible — along with countless design options, from cladding profiles to hardware choices.
Call 1-800-236-9690 or visit **marvin.com**

MARVIN
Windows and Doors

CIRCLE 9 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

If you look real close you can see 25 years of fire-rated glazing experience reflected in it.



SCHOTT PYRAN® fire-rated glass-ceramics are an architect's best friend.

PYRAN® is everything you've been looking for in fire-rated glass. It's fire-protective, impact-resistant and, aesthetically speaking, quite fetching. PYRAN® Crystal offers the highest standard of clarity, transmission and true color rendition. And PYRAN® Star is both beautiful and economical. PYRAN® is available with a surface applied film, laminated or polished. It comes in large sizes and is easily accessible through distributors, fabricators and glaziers. For new construction or retrofit, spec the glass with a loyal following among fire professionals – PYRAN®.

Home Tech
SCHOTT North America, Inc.
Phone: 502-657-4417
Fax: 502-966-4976
E-mail: pyran@us.schott.com
www.us.schott.com/pyran
©2005 SCHOTT North America, Inc.
® PYRAN is a registered trademark of SCHOTT AG, Mainz, Germany

CLASSIFIED UL

SCHOTT
glass made of ideas

PRODUCT SCALE

CAMBRIDGE ARCHITECTURAL MESH
AMERICAN MANUFACTURER OF FINE WOVEN STEEL
WWW.ARCHITECTURALMESH.COM
TOLL FREE 866 806 2385

ARCHITECTURAL MESH
CIRCLE 11 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Accessible claims service. Expert answers.

When a claim occurs the questions begin: How will I pay? How will the hassles of dealing with a claim affect my business? As a CNA/Schinnerer insured firm, you can be certain of our ability to respond with streamlined service and expert answers. We'll handle your claim personally through one of our over 35 claims specialists located across the country. From there, a team of experts with nearly 50 years of industry experience takes over, to provide a solution you can feel good about. So you can keep things running, business as usual.

Find out more about CNA/Schinnerer's expert service at ***www.PlanetAEC.com*** or by calling us at **301.961.9800**.





Innovation from Expertise

CIRCLE 12 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CNA is a service mark and trade name registered with the US Patent and Trademark Office. The program referenced herein is underwritten by one or more of the CNA companies. This information is for illustrative purposes only and is not a contract. ©2005.



PHOTOGRAPHY: © ANDRÉ SOUROUJON

Editorial

By Robert Ivy, FAIA

Something's in the air. Call it community-based design. Call it architecture for people. In any understanding, socially conscious architecture seems to be blossoming again. Kate Schwennsen, FAIA, the incoming president of the AIA and an educator, says the sea change is palpable in the design studio. According to Schwennsen, students seem interested in a different agenda from an earlier generation, which was more focused on career or technology. Quietly, the people-centered component of architecture is spreading like goodwill, putting designers and builders in touch with real people in real places.

Our collective hunger for humanistic design and planning is not new. In the not-so-distant past, think of Frederick Law Olmsted and the 19th-century parks movement, offering open space and fresh air for tenement-bound urban dwellers. More recently, remember storefront architecture of the late 1960s and 1970s? The attitude accompanied the haircuts and the tie-dyes; environmentalism of the same period had a strong social component.

While art with a capital "A" or design for design's sake attracts many young people, idealism provides another primary rationale for their vocation. As a group, students are often interested in helping individuals obtain higher quality of life, whether in housing or in public places. Graduation, however, can be a wake-up call. The business world offers few opportunities to spread our fellow feeling, much less our good works. Where, we wonder, can we exercise our skills on behalf of others?

Look around and see that architecture for people comes in different forms. It's not all about freebies. Michael Pyatok has built a practice with clients who need his services in special ways. The YWCA Family Village in Redmond, Washington, for instance, includes a diverse program of services and housing for homeless women with children. In California, Ann Fougeron designed women's clinics in Bay Area malls that create a sense of comfort while providing colorful, secure environments. On the opposite coast, in Massachusetts, architect Carol Burns designed a shelter called Casa Nueva Vida for embattled Hispanic women.

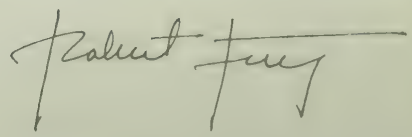
Universities have long been in the hands-on business. Steve Badanes and Damon Smith have led a design-build studio that has created the Danny Woo Community Gardens (an urban park in Seattle) and the T.T. Minor Elementary School play area, among others. The University of Washington, where Badanes and Smith teach, has reached out to communities as far away as Mexico, spreading design power south. Still farther it spreads: The College of Architecture and Planning at Ball State University in Indiana recently headed to Southeast Asia. This year, 21 students made the trek to Sri Lanka, site of the devastating tsunami.

Many programs, like Auburn's Rural Studio in Alabama, are already superstars. You know about organizations like Habitat (and Architecture) for Humanity, which provide both basic shelter and disaster relief. And you probably recognize New York's Robin Hood Foundation, which redistributes Wall Street wealth to the public schools, employing talented designers for libraries. But do you know about Design Corps, which Bryan Bell founded in 1998 to provide decent housing for migrant workers? Or the theoretical programs by San Diego architect Teddy Cruz, such as "Living Rooms at the Border?"

Architect John Peterson, a San Francisco practitioner, started something entirely fresh that is growing into a powerhouse. Public Architecture, a nonprofit organization that his firm hosts, has evolved from its initial efforts at community building. Although only in its "adolescence," according to Peterson, it has come up with a great idea.

The "1% Solution," proposed by Public Architecture, suggests that architects donate a small but statistically meaningful percentage of their time toward the public good—a small, but powerful notion. John Cary, Public Architecture's executive director, hopes that architects can donate time or resources "without having to make extreme sacrifices." One percent translates into 20 hours of volunteerism, or 1 percent of financial resources, piddling amounts that, when added together with the work of many other architects, could make tremendous changes. The idea is smart, clean, and memorable.

With all this youthful enthusiasm, and all these programs, has the pendulum decisively swung from formalism to activism? Apparently, it's tilting in a new direction. Perhaps after a decade of technical and material advancement, armed with the realization that we can make anything we set our minds (and our computers) to, we are turning our attention to the fundamental question: Who are these amazing forms intended for?



A New Vision in Fire Rated Walls.



PyroEdge™ | Pyrobel™ | PYRAN® | StileLite™ | HighLite™ | Vision 60 System™

PyroEdge, StileLite, HighLite and Vision 60 System are registered trademarks of interEdge Technologies. Pyrobel is a registered trademark of Glaverbel S.A. PYRAN® is a registered trademark of SCHOTT AG (Mainz, Germany).



Introducing the newest solution in fire rated glazing from InterEdge!

Imagine an entire fire rated wall uninterrupted by vertical framing! The Vision 60 System is just that—a fully glazed 60-minute transparent wall with no intermediate framing. Each panel of Pyrobel-60 fire rated glazing is separated by a slim silicone caulking, offering truly free and open vision for your projects. With numerous framing options available, this system is ideal for transportation facilities such as airports, retail centers, commercial office buildings, hospitals, schools and any other location where uninterrupted viewing is desired. Take your projects from ordinary to spectacular with the Vision 60 System!

For the most up-to-date information on our entire suite of fire rated solutions, including maximum glazing sizes, framing details, CSI specs, and project photos, please visit us online at **www.firesafe-glass.com** or call us at **1.877.376.3343**.

INTEREDGE TECHNOLOGIES
An AFG Glass Company

AFG GLASS

Vision for Life. Vision for Safety.

Fire Rated Glazing Solutions for All Your Visions.

CIRCLE 13 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



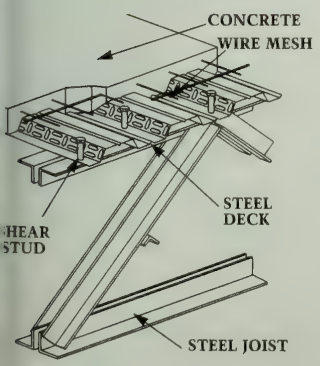
Why Vulcraft Composite Joists Received High Marks From Virginia Tech.

When planning the $21 million Torgersen Hall Virginia Tech's advanced communication, information and technology center, the architecture/engineering firm of Sherertz Franklin Crawford Shaffner, Inc. faced a number of design challenges. They included cost, flexibility in floor usage, large column free 40′ bays and ample space for HVAC ductwork.

After careful analysis, it was clear that composite joists developed jointly by Vulcraft and Virginia Tech's structural engineering department were the answer.

The system involved 3″ composite deck supporting 6″ of normal weight concrete with 3/4″ diameter shear studs providing connection between the steel joists and overlying concrete slab. It all makes for popular longer floor spans while minimizing floor-to-floor heights, because HVAC





ductwork can run through the open webs of the joists. And the system is almost always less expensive than cast-in-place reinforced concrete construction.

As the largest and most experienced producer of steel joists and deck in the country, you can look to Vulcraft for innovative, cost saving design ideas. Virginia Tech did, and we passed with flying colors.

NUCOR

VULCRAFT GROUP

www.vulcraft.com

Brigham City, Utah 435/734-9433
Florence, SC 843/662-0381
Fort Payne, AL 256/845-2460
Grapeland, TX 936/687-4665
Norfolk, NE 402/644-8500
St. Joe, IN 260/337-1800
Chemung, NY 607/529-9000
(Vulcraft of NY, Inc.)

CIRCLE 14 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

RCHITECT/ENGINEER: Sherertz Franklin Crawford Shaffner, Inc. • DESIGN ARCHITECT: Esocoff & Associates Architects
ENERAL CONTRACTOR: Branch & Associates • STEEL FABRICATOR: Banker Steel • STEEL ERECTOR: Williams Steel Erection



YKK AP *is...* *green.*

YKK Group Environmental Charter

The YKK Group Environmental Charter was established in September 1994 and has consistently taken on environmental issues as a company-wide challenge. The principle of the Environmental Charter is to promote prosperous, healthy lives and harmonious coexistence with our environment and to preserve and improve the environment throughout our corporate operations. Through our corporate activities, we seek to develop an environmentally friendly management style and contribute to the establishment of a recycle-type economic society by promoting environmental policies at all stages – from design and production to disposal, recovery, and recycling.

ISO 14001:2004 Certified

www.ykkap.com
1-800-955-9551

Recycling and Reuse

- All postindustrial aluminum waste is recycled for reuse on-site
- All anodizing byproducts are converted into materials for industrial reuse
- All paper and cardboard waste is recycled and we use electronic forms whenever possible to minimize paper consumption

Reducing Emissions

- At only 5%, our air emission levels from paint processes are far below current EPA standards
- Regenerative burners in our melting and casting processes enable savings of 50% on fuel consumption

Wastewater Treatment

- YKK AP independently developed technology to improve wastewater processes associated with anodizing
- Initial recovery prior to treatment processes reduces wastewater and chemical consumption

©2005 YKK AP America Inc. is a subsidiary of YKK Corporation of America.
CIRCLE 15 ON READER SERVICE CARD OR GO TO ARCHIVECORD.CONSTRUCTION.COM/PRODUCTS



When a design project becomes larger than life, you want to be sure you don't lose ground. That's why **savvy designers specify AWI Quality Certification** on custom architectural woodwork projects. AWI's internationally-recognized Quality Certification Program helps design professionals **verify the skills of woodwork providers, ensuring compliance** with the AWI Quality Standards during fabrication, finishing and installation when inspected.

Call **800-449-8811** or visit **awinet.org** to register your next architectural woodwork project.

And get an extra measure of assurance before you get clipped.

AWI ARCHITECTURAL WOODWORK INSTITUTE

1952 Isaac Newton Square West, Reston, VA 20190 telephone 703 733 0600 fax 703 733 0584 www.awinet.org

CIRCLE 16 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Who are you designing for today?



AVONITE SURFACES

INNOVATIONS IN SURFACING

providing signature solutions for your diverse needs, since 1983

STUDIO COLLECTION

BEYOND ORDINARY

54 visionary surfaces dedicated to those who passionately pursue original ideas and unlimited possibilities

celebrate a fresh sense of independence and style

FOUNDAT.ONS™

ADVANCED ACRYLIC SURFACING

51 familiar colors and textures, embracing nature's own earth tones and vivid accents

competitively priced for all your residential and commercial needs

800.4.AVONITE • www.avonitesurfaces.com • Aristech Acrylics LLC • call or log on to get your new sample cases

CIRCLE 17 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Not everyone can have a corner office.

But they can all have its door.



MI INDUSTRIES Architectural Wood Doors



Whether you're restoring a historic building or want to add a classic feel to a new design, you'll find the elegance and beauty you seek in VT Stile and Rail Doors. The newest offering from VT, our stile and rail doors allow you to fulfill all of your door needs.

VT Stile and Rail Doors offer the highest quality of product, aesthetic compatibility, and design integrity. Choose from raised or flat panel elevations. Assert your preference in ovolo, ogee, or square sticking. And for your life safety issues, we can provide doors with fire ratings up to 90-minute.

Plus, you can specify flush doors to complement your stile and rail doors, and they're guaranteed to match—thanks to our WDMA catalyzed polyurethane factory finish.

So when you're looking for stile and rail doors for your project, look no farther than VT Architectural Hardwood Doors. The technology of the 21st century. The timeless splendor of centuries long past.





The VT Stile and Rail Advantage

- State-of-the-art production facility and equipment.
- Raised and flat panel door elevations.
- Matching hardwood edges.
- Your choice of ovolo, ogee, or square sticking.
- Manufactured using doweled construction for maximum performance.
- 20-, 45-, 60-, and 90-minute fire-rated doors available. All fire-rated doors meet positive pressure standards.
- Factory machined to exacting requirements for hardware, including pre-drilled pilot holes for hinges and faceplates.
- Doors individually packaged for protection.

VT Stile and Rail

Design

- WDMA custom-grade construction as standard
- Premium-grade construction available per architectural specification
- Five-year warranty for interior applications
- Full array of domestic and imported hardwoods
- Popular species in stock for faster turnaround times
- VT flush wood doors available with WDMA TR-6 catalyzed polyurethane factory finish or OP-6 factory painting
- Sealed top and bottom rails on factory finished doors

VT Customer Service

Satisfaction is our finest product

- VT sales personnel are factory trained and provide architectural consultations as part of our customer service standard
- Call our architectural hotline for technical assistance when planning a new project 800.827.1615, ext. 345
- Up-to-date product, technical and specifications information always available at www.vtindustries.com/doors



WWW.VTINDUSTRIES.COM/DOORS
800.827.1615 EXT. 345

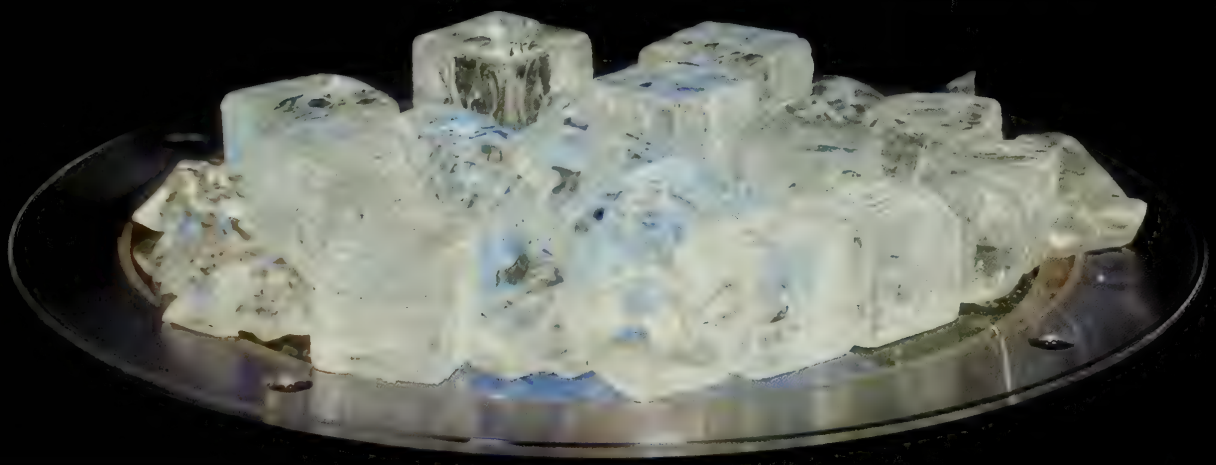
VT INDUSTRIES Architectural Wood Doors

Really. Cool.

Introducing the ICEE Lens - A significant advancement in the science of heat management.

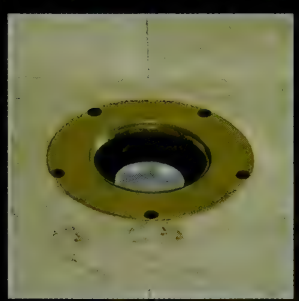
- Achieves 90+% light output.
- Biaxial control with full 360 rotation and 15° or greater vertical adjustment*.
- Available in 7" and 11" diameter footprint.
- Works with all lamp & reflector configurations.
- Reduces lens temperature significantly below 160°F.*
- Significantly extends contact time - touchable for minutes - not seconds*.

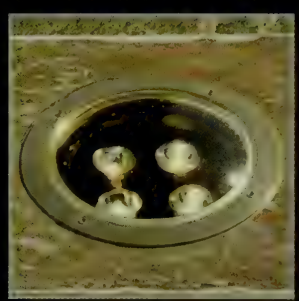
*Lamp choice dependent.



Finally.









The ICEE lens is available on B-K Lighting's popular line of Precision² and Tenaya² in-grade luminaires.

B-K LIGHTING
Quality to Last a Lifetime™
559.438.5800 • www.bklighting.com

CIRCLE 18 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



WAUSAU WINDOW AND WALL SYSTEMS

1 877 678 2983

WAUSAUWINDOW.COM

DEADLINES **BUDGETS** SPECIFICATIONS

SEE THROUGH IT ALL

WAUSAU WINDOW AND WALL SYSTEMS

ADVANTAGE BY WAUSAU PRE-ENGINEERED WINDOWS

Right
THE WAY YOU WANT IT

CIRCLE 19 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



World Trade Center PATH Station, New York, NY
Architect: Santiago Calatrava

inspiration

Looking like they might soar away at any moment, the futuristic, cantilevered steel gull-wings of the new World Trade Center PATH Station canopy are a tribute to imagination. Helping make them possible is EPIC Metals' Wideck EDP structural roof deck ceiling system. With a flush surface appearance and strength to clear span from 10 to 34 feet, the Wideck EDP and WP systems help architectural vision become reality.

For more information call 877-696-3742, or visit epicmetals.com

EPIC METALS CORPORATION

CIRCLE 20 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

The healthy glow of good design



WALKER ZANGER

WE KNOW GOOD DESIGN WHEN WE SEE IT. THAT'S BECAUSE AT Walker Zanger we have spent over 50 years pursuing a passion for good design expressed through stone, ceramic and glass tiles. Our goal has always remained constant - to present you with a dazzling array of products, thoughtfully designed to stand the test of time. Because you know good design when you see it, too.

PRODUCT SHOWN **MANTRA GLASS MOSAICS™**

CERAMIC TILE · STONE TILE & SLABS · MOSAICS · TERRA COTTA · GLASS TILE | 877.611.0199 | WWW.WALKERZANGER.COM

CIRCLE 21 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Letters

Sculpture housing sculpture
I doubt I am the only architect who delighted in the inadvertent verity of the Record Houses 50th Anniversary issue's cover: the new Record House as a home for sculpture. Sculpture housing sculpture. It all finally makes sense!
—Duo Dickinson
Via e-mail

Mother Nature's unfinished work
Your article on Steven Holl's Turbulence House in April's Record Houses issue [page 185] states, "The final structure … appears integral to the mesa." Let's see: "Integral: constituting a completed whole." So, obviously a big, metal, round, shiny "stump" was exactly what nature had planned for the site but never got around to making. Could your editors really be more daft than that?
—Derik T. Price
Fairbanks, Alaska

Nothing like a good read
A quick note to congratulate you on another great issue [April 2005]! The piece you did on Record Houses was smart, inspiring, and very well done. I really enjoyed it.
—David Rockwell
Rockwell Architecture, Planning and Design
Manhattan

Support your fellow architect
Thank you for your March news item "Queens Museum drops Eric Owen Moss from renovation" [page 30]. Wouldn't it be nice to see some ethical support from the city's "shortlist" who are being considered to take over the project? They could support Moss by refusing to supplant him. Going along with Queens Museum executive director Tom Finkelpearl and his plan to replace Moss undercuts the idea and legitimacy of design competitions. It is time for architects to support their colleagues.
—Gerald Gamliel Weisbach, FAIA
San Francisco

Sweet metaphors
Robert Campbell, in his critique of MIT's former president's "shallow novelty-seeking" [April 2005, page 101], misunderstands the school's intent as well as denigrates the creative process of two of our finest architects. Great works, whether of poetry, art, or architecture, spring from metaphor.

And what's wrong with ingenuity as a metaphor? There's a rich history of architectural form that reflects the ingenuity of its users. While it's true that great invention has and will come out of bland buildings, there's no reason it can't come out of metaphorically ingenious ones. MIT's Computer Science department did revolutionize computing in a poorly designed concrete box. But can they not continue to do great things at Frank Gehry's Stata Center?

A call for metaphors of ingenuity might have produced, in lesser hands, a novelty building in the shape of a big brain. But Gehry is a better architect than that. His metaphor of the colliding village at the Stata Center is an apt and ingenious one that speaks of what's going on in science today as academic barriers between disciplines break down. It's well-thought-out and in no way shallow.

Nor is Steven Holl's sea sponge metaphor at



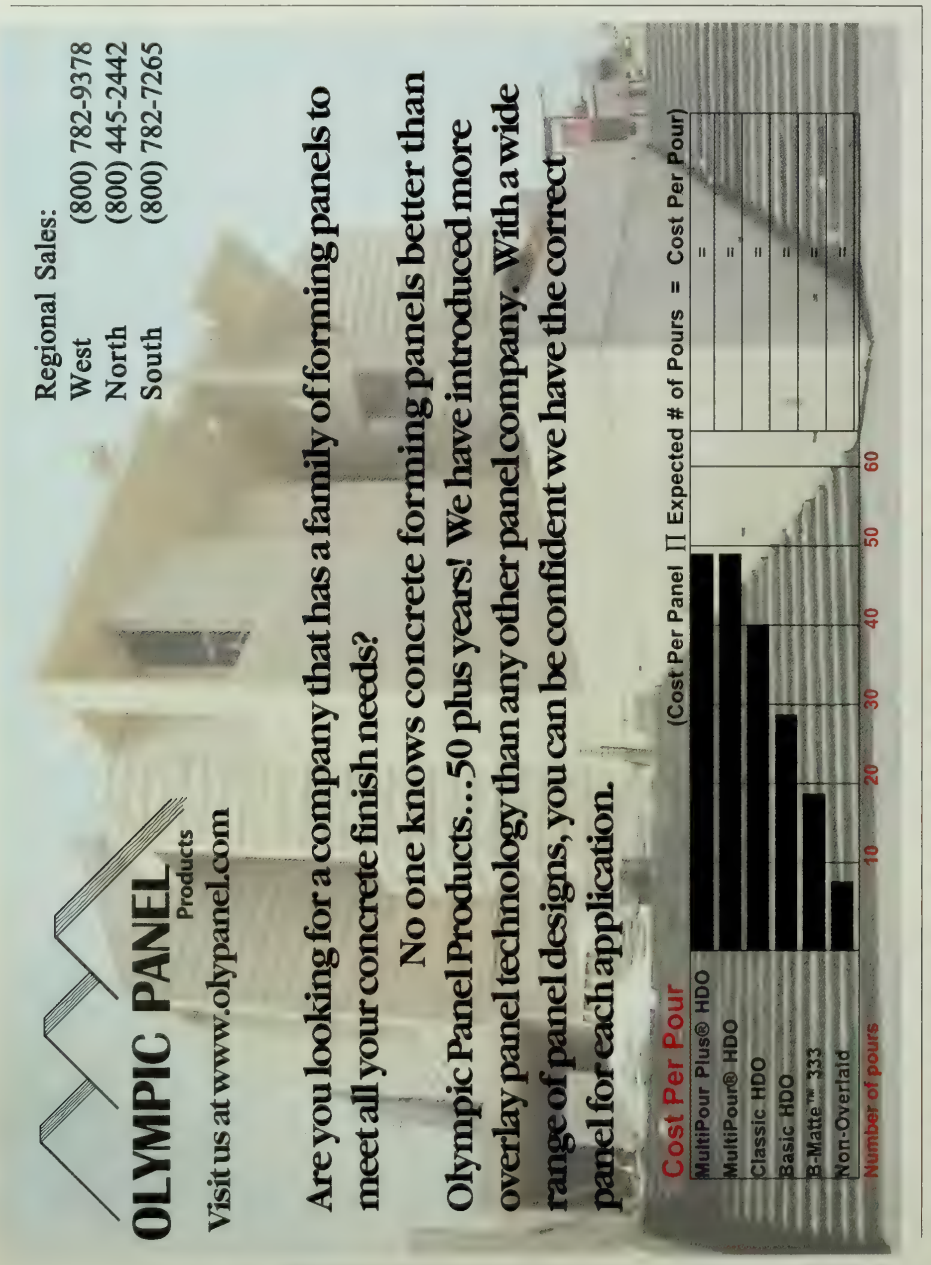
Simmons Hall a novelty. By breaking up the exterior with porous concrete voids and "lungs" that contain student lounges, Holl redefines scale and avoids a "brick wall" reading. His color-coding of the building's exterior in the form of a stress diagram accurately reflects the ingenuity of the engineering students who live there.

It's true that the corridor system at MIT has served the school well. But so have its more daring designs, the ingenious chapel and auditorium of Eero Saarinen and the sinuous dormitory of Alvar Aalto.

Behind MIT's recent building program is the desire to continue that tradition, not to commission novelty for its own sake. Many of the Institute's buildings from the 1970s to the 1990s were not only bland and featureless, but ill-suited and inflexible for their intended purposes.

Neither Gehry's nor Holl's buildings are without their flaws, but ingenious daring is tougher to pull off, and less crowd-pleasing, than reworking familiar forms.

—Paul Restuccia
Boston



CIRCLE 23 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

A well-deserved honor

I was quite thrilled to read in January's Record News that Santiago Calatrava, FAIA, has been selected as the 61st recipient of the AIA Gold Medal [page 25]. The Spanish-born architect was long overdue to receive the award.

Over the years, Calatrava has been designing thought-evocative structures—structures that indeed test the limits of engineering, from the Alamillo Bridge in Seville, to the Auditorio de Tenerife in the Canary Islands, and everything in between. He is the master of this kinetic genre, embedding structures into sculpture in creating architectural icons for cities. His architecture can be described as the art and science of the built environment.

To this polymath, I say congratulations, and to the AIA I would like to say thank you for choosing to honor a man who has challenged architectural students around the world, myself included. Architecture honors a new kind of hero.

—Bobola Oniwura
Lagos, Nigeria

Exporting our dirty work

When are we going to stop the Cro-Magnon slicing and dicing of the architectural profession ["Are We Exporting Architectural Jobs?," January 2005, page 82]? Design and competitions are "good"? Details and construction are "bad"? As architects, we beat our chests at how we're looked upon as effete elitists, and then we chop up the drawing process and send the "bad" parts out so architects in other countries can spend more hours and get less pay to do our dirty work. Not only that, but we're doing it at the expense of our own future graduates. Construction and detailing are not the enemy. We should be embracing these portions of the design process to produce better buildings. Period. Sending construction documents overseas only further distances us from creative solutions by rewarding repetition and trite designs. Let's leave Wal-Mart at Wal-Mart.

—Patrick Stuart
Design Director
Neighborhood Design Center
Columbus, Ohio

Corrections

The photographer cited for Casa Cocoon in the April feature "Five Cubes and a Blimp" [page 116] should have been Mark Munro, not Mark Mulder. The February feature on Jim Cutler [page 72] misstated the name of the landscape architect for Bill Gates's residence. He was Tom Berger of The Berger Partnership.

Write to rivy@mcgraw-hill.com.

Arboreal™



Bamboo Forest



plus
Recycled Aluminum



together, **Arboreal™**

Innovative use of resources. Brilliant wall and ceiling solutions.

- Sustainable
- Variety of real wood veneers
- Wall and ceiling systems
- Curved or flat
- Acoustical
- Lightweight
- Class 1 Fire Rating
- Accessible
- Affordable

CEILINGS PLUS™
800-822-3411
323-724-8166
www.ceilingsplus.com

CIRCLE 24 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

© 2005, Ceilings Plus™

This month in Continuing Education

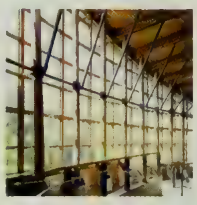
In This Issue:

Pages 284 – 291 **Factors for Achieving Water Conservation Excellence: Why—and What—Today's Architect Should Know About Plumbing and Its Relationship to Sustainable Design**
*Sponsored by **Sloan Valve Corporation***



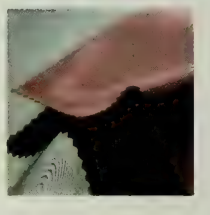
LEARNING OBJECTIVES:
- Understand the architect's role in water conservation
- Recognize what is required to earn points for LEED-NC Water Efficiency Credit 3
- Understand how to calculate Baseline and Design Case indoor water consumption

Pages 293 – 297 **Greater Vision: Alternate Window Materials in Commercial Buildings**
*Sponsored by **Pella Corporation***



LEARNING OBJECTIVES:
- Understand window selection criteria and its impact on your projects and clients
- Identify primary advantages and disadvantages of different window framing materials in commercial buildings
- List and compare the advantages and disadvantages of sealed insulating glass and dual glazed systems
- Establish a method to determine the most appropriate window system for future projects

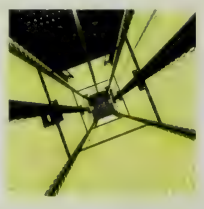
Pages 299 – 303 **The Art of Product Research and Selection**
*Sponsored by **Sweets Product Marketplace***



LEARNING OBJECTIVES:
- Explore methods and best practices on the art of product research and selection
- Analyze product evaluation criteria used by established architectural firms and seasoned design professionals when specifying products
- Understand information typically required for approval of product substitutions on projects
- Review the types of product information generally required during various project phases

Online:

Vertical Materials Handling Systems aka Dumbwaiters.
*Sponsored by **Matot, Inc.***
To access this article online, please visit:
archrecord.construction.com/resources/conteduc/archives/0505matot-1.asp



LEARNING OBJECTIVES:
- Have a general knowledge of different vertical material handling systems and when to use them
- Identify key design and planning criteria
- Discuss the benefits of using vertical material handling systems

This month at archrecord.construction.com



Temple Bat Yahm Chapel and Campus, Courtesy Lehrer Architects

Building Types Study

This month we feature Sacred Spaces. See how architects now understand that simple is often more powerful than complex when it comes to expressing what is hallowed. On the Web, we feature an additional six projects not available in print.

Daily Headlines

Get the latest scoop from the world of architecture.



Project: City of Santa Cruz Accessory Dwelling Unit Program, Courtesy RACESTUDIOS

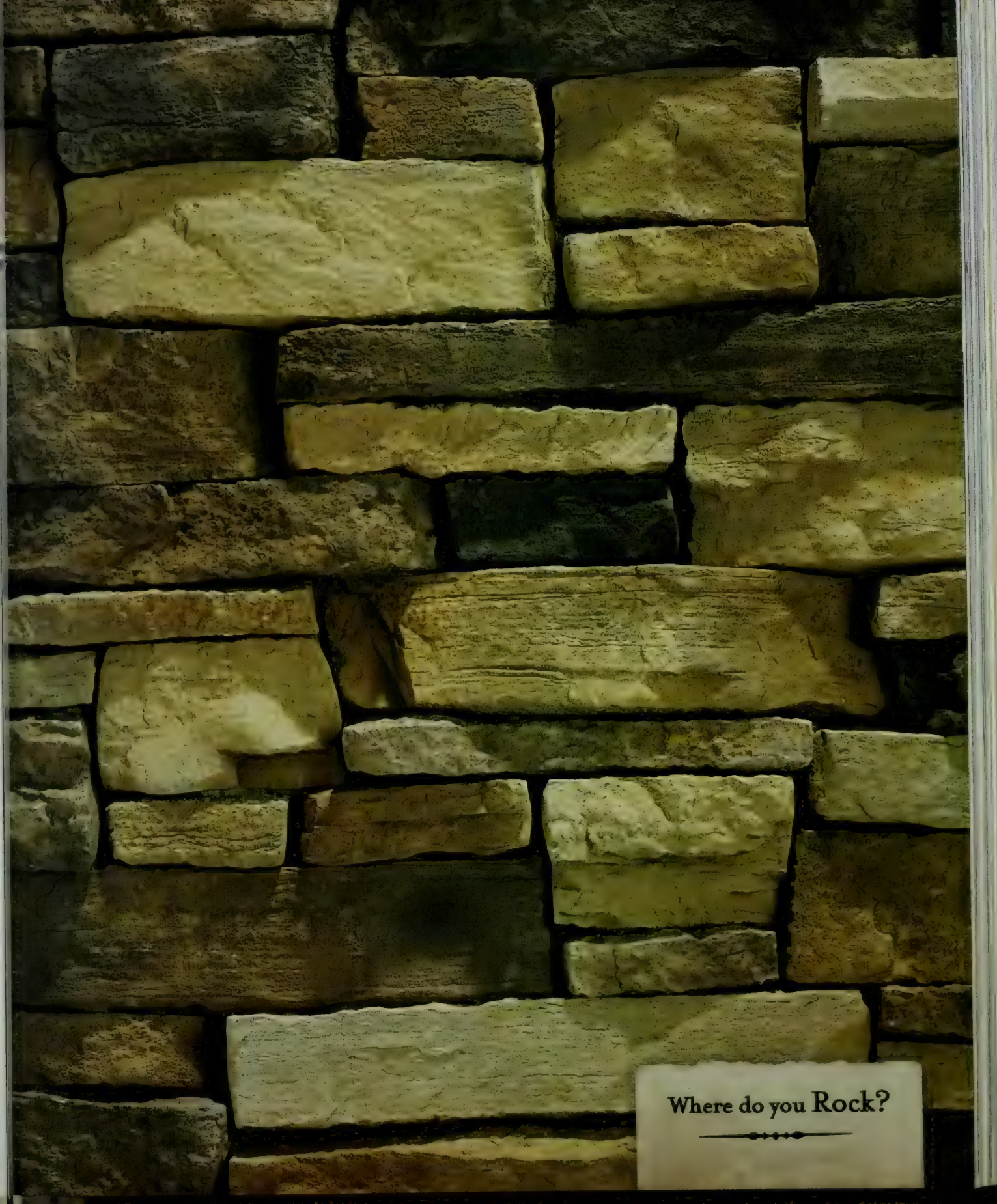
AIA Honor Awards

This month our Web site features the 2005 AIA Honor Award Winners. Have a closer look at the winners in the categories of Architecture, Interiors, Urban Design, 25-year Award, and Firm of the Year. Also in archrecord2, learn more about the five architects who have been awarded the 2005 Young Architects Award.



Philip Johnson

Discover what three longtime observers of Philip Johnson—an admirer, a detractor, and his biographer—have to say about this famous figure's career. Also, revisit the 2001 interview AR had with Johnson that is exclusive to our Web site.


Where do you Rock?

Grand Entrances
Wine Cellars
Outdoor Living Spaces
Porte Cocheres
Kitchens
Living Rooms
Breakfast Nooks

Your imagination and Eldorado Stone. It's a really good fit. For a quick tour of innovative Eldorado installations, go to eldoradostone.com/walkthrough.

CIRCLE 25 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

See it. Believe it. Spec it.
800.925.1491

ELDORADO STONE
A HEADWATERS COMPANY


Durango Mountain Ledge with a
dry-stack grout technique
The Most Believable
Architectural Stone Veneer
in the World.™



Form follows function into every corner of the Viking kitchen.



Viking products look beautiful. But rest assured, plenty



of substance lies beneath those gleaming exteriors. Viking originated professional performance for the home. And only Viking offers a



complete professional



kitchen. Well, two of them, actually. Both the heavy-duty Professional Series and sleek Designer Series deliver ultra-premium features and design consistency. Both lines are built to the same specifications. So no matter which style your client chooses, you know exactly what you're working with. And up to 14 exclusive finishes give you even more options to achieve perfection.

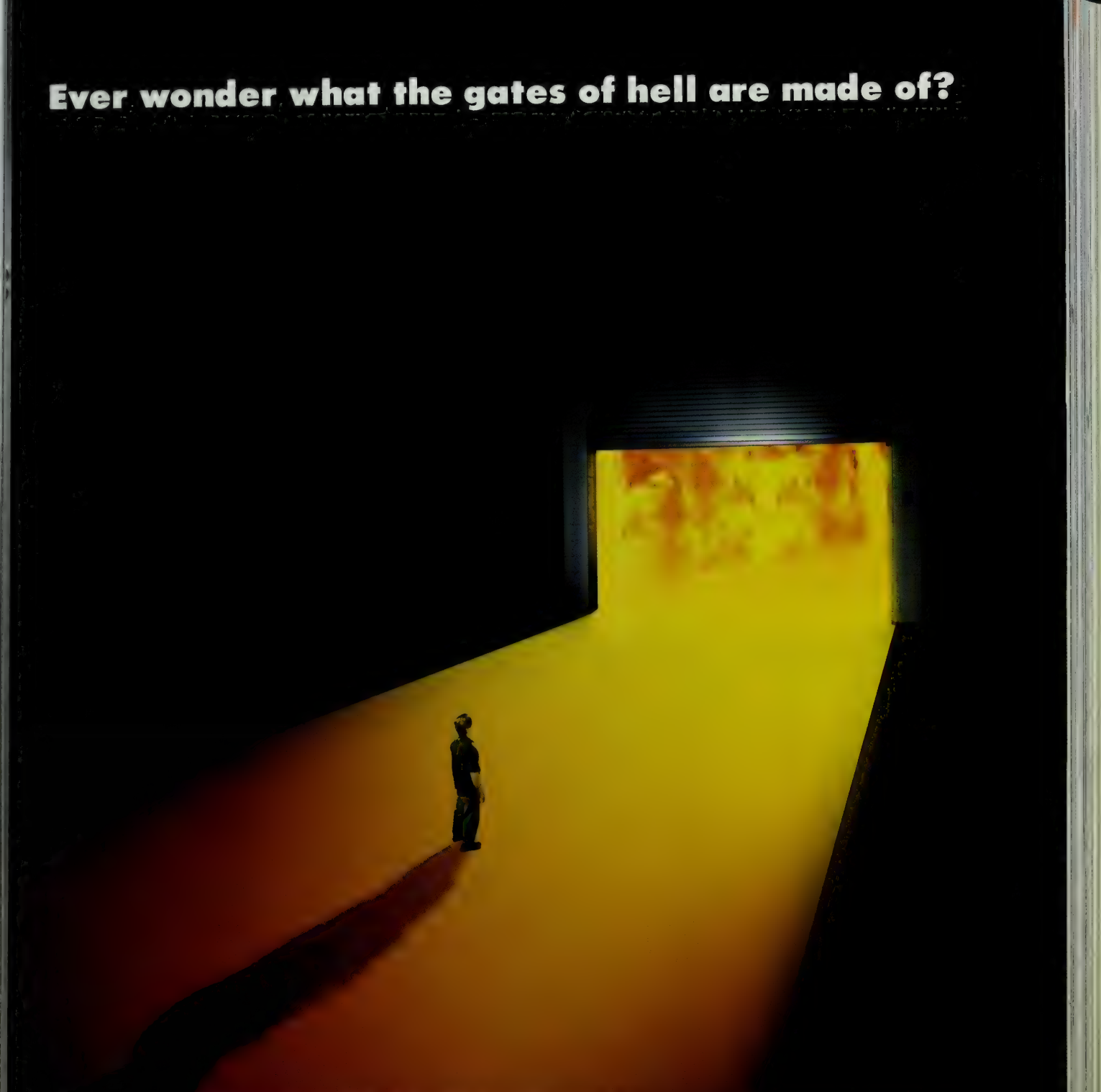


VIKING®

vikingrange.com

CIRCLE 26 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Ever wonder what the gates of hell are made of?



Your fire closures shouldn't cause uncertainty. specify emergency response products that you can rely on. Cornell's business is closure products and, for over 175 years, we've proven time and time again that we'll be here for you until hell freezes over.

Cornell. Your single source for Emergency Response Closure Products.

CORNELL

SAFE AND SECURE

800.233.8366 www.cornelliron.com

Contact us to receive our new Emergency Response Products Brochure

VISIT US AT AIA, BOOTH #3131

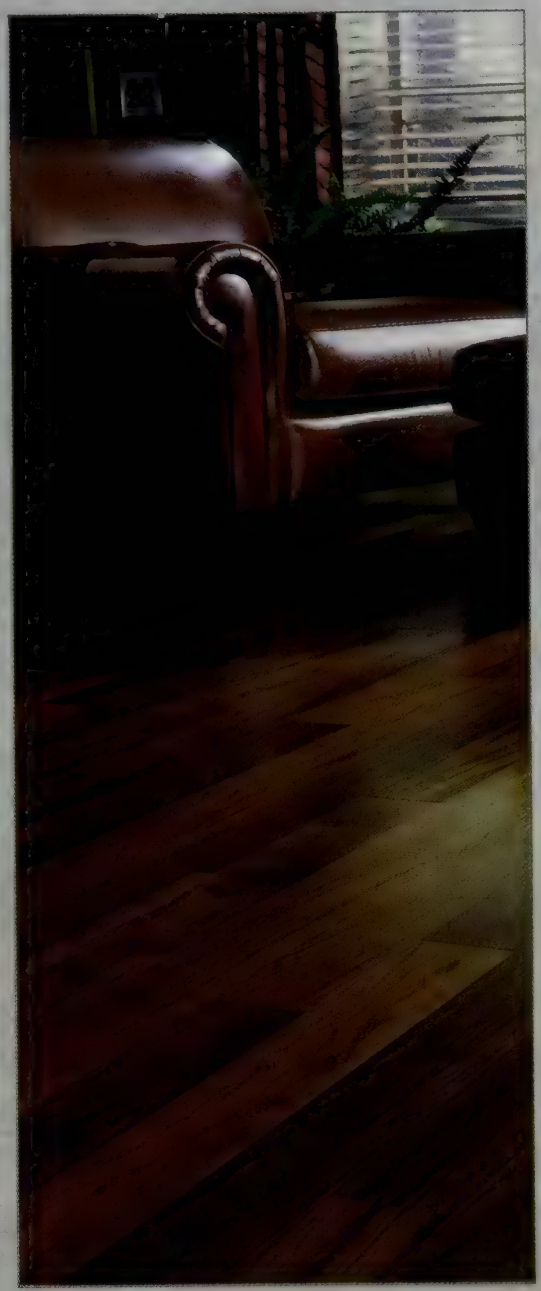
CIRCLE 27 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

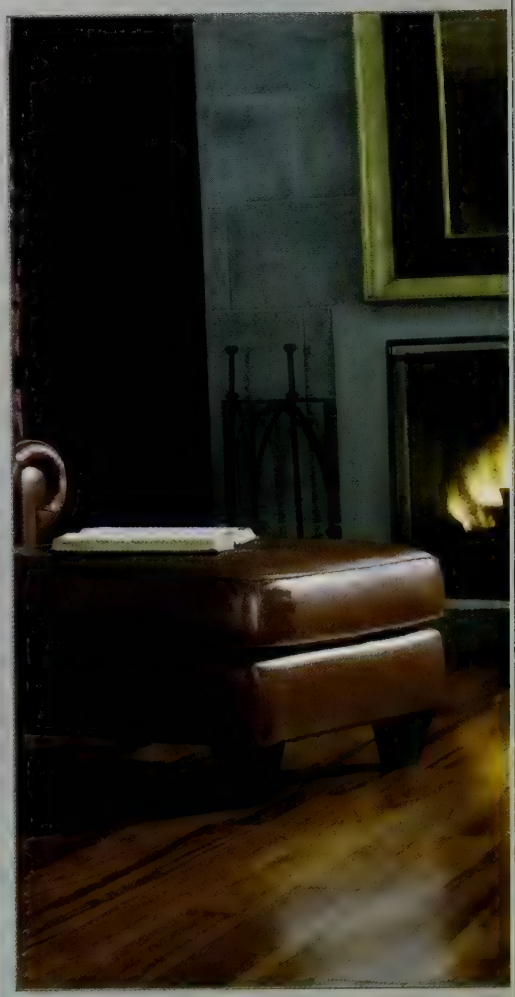


CIRCLE 28 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

fashion under foot







- Indusparquet®
 3/4" Prefinished Solid
- Indusparquet®
 5/16" and 7/16" Prefinished Solid
- Casanova Engineered
- BR-111™ 5/16"
 Prefinished Engineered

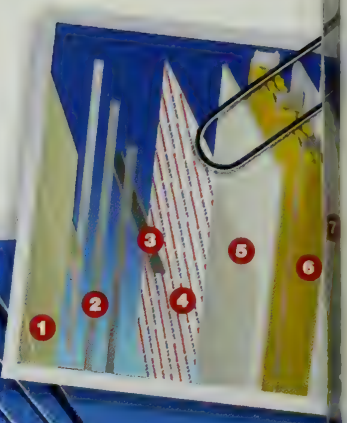
BR-111™ exotic hardwood flooring

800-525-br111 (2711) ■ www.br111.com

CIRCLE 29 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

LESSON: Thermal + Moisture Control

Each wall component multiplies your risk of failure.





Formawall™ Dimension Series® is the one-component wall that works.

What could go wrong? For starters, building wrap rips, fasteners puncture, tapes fail, sheathing is penetrated, steel studs are thermally inefficient and can be sites for condensation, insulation soaks and caulking cracks.

Instead, CENTRIA Formawall Dimension Series compresses the multi-component cavity wall into a single, non-absorbent metal and factory-foam-insulated wall panel. How? A thermally efficient core combined with impervious metal faces, create an air and vapor barrier on the inside and a rainscreen element on the weather side. The side joinery is pressure equalized and has factory seals which connect panel to panel. The result is one, insulated, integrated, lightweight, and easily installed component that defeats water penetration for good without relying on exposed sealants, cavities, or wraps.



Learn more about avoiding moisture problems in exterior walls with the CENTRIA Institute's *Studies In Advanced Thermal & Moisture Control.* The handbook is free for architects, contractors and building owners with a phone call to CENTRIA today.

CENTRIA

www.CENTRIA.com

CIRCLE 30 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

North America **1.800.752.0549** China **+86 (0)21 5831 2718** Dubai **+971.4.339.5110**

a new material

We are developing
the ideas of the future.
Giant formats, ventilated façade
systems, metallic surfaces,
extreme resistance, exclusive
designs... ceramic tile is no
longer only the traditional wall
and floor covering you knew.
It is evolving into a new material.
Discover it.



Visit us at the Pavilion of Spain at AIA in Las Vegas, May 19-21, Booth #4046.

tile of spain®

a new material

www.spaintiles.info • Tile of Spain - Trade Commission of Spain • Voice (305) 446-4387 • Fax: (305) 446-2602 • e-mail: miami@mcx.es

Tile of Spain is a registered trade mark of ASCER (Spanish Ceramic Tile Manufacturers' Association)

CIRCLE 31 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



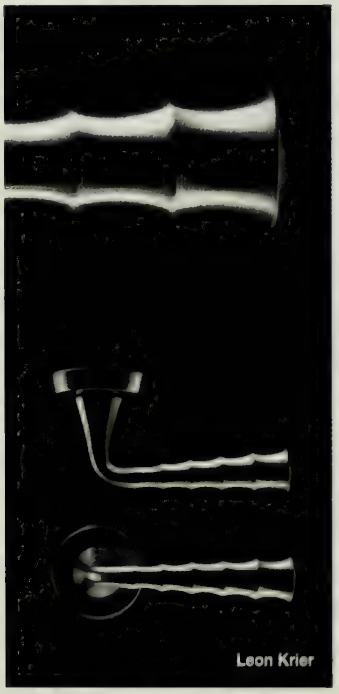
Maniglie
Accessori del mobile
Arredobagno

vcr
Valli&Valli

www.vallievalli.com



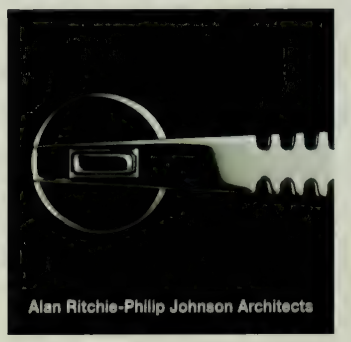




Maniglie d'autore

Eero Aarnio
Ron Arad
Gae Aulenti
Mario Bellini
Cini Boeri
Achille Castiglioni
Cerri & Associati
David Chipperfield Architects
Antonio Citterio
Droog Design-Ronald Lewerissa
D'Urbino-Lomazzi
Foster and Partners
Massimiliano e Doriana Fuksas
Frank O. Gehry
Michael Graves
Gregotti Associati
Hans Kollhoff
Yoshimi Kono
Leon Krier
Chi Wing Lo
Vico Magistretti
Angelo Mangiarotti
Richard Meier
Renzo Mongiardino
Jean Nouvel
John Pawson
Gustav Peichl
Piano Design Workshop
Andrée Putman
Alan Ritchie-Philip Johnson Architects
Aldo Rossi
Sottsass Associati
Taller Design Ricardo Bofill
Matteo Thun
Marco Zanuso

Fusital



Valli&Valli

Valli&Valli (U.S.A.) Inc.
150 East 58th Street, 4th floor
New York, NY 10155
Tel. (212) 326 8811
Fax (212) 326 8816
Toll free: (877) 326 2565
sales@vallivalli-us.com

CIRCLE 32 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Record News

Highlights

p. 53 **Ellerbe sues HOK over firm defections**
p. 54 **AIA to investigate decline in new licenses**
p. 56 **Florida group fights against McMansions**
p. 66 **On the Boards: Vegas**

Is Renzo Piano America's default architect?

American museums seem to be operating on a new architectural principle lately: If there's any doubt about the design of your new addition, hire Renzo Piano.

In the past year, the Italian architect has received expansion commissions from the Whitney Museum of American Art in New York City, the Los Angeles County Museum of Art (LACMA), and the Isabella Stewart Gardner Museum in Boston. Last year, he completed the graceful Nasher Sculpture Center in Dallas [RECORD, January 2004, page 100], and his firm, Renzo Piano Building Workshop, is now working on the Morgan Library expansion in New York City (opening next spring); the High Museum Expansion in Atlanta (a 177,000-square-foot project opening this fall); the glass, steel, and limestone Chicago Art Institute north wing addition; the California Academy of Sciences expansion in San Francisco; and (though it's in jeopardy) the expansion of Harvard's Fogg Art Museum in Cambridge, Massachusetts. He is also rumored to be the favorite to design a new space for the Barnes Foundation in Philadelphia.

"It seems he's the only game in town," says Ken Carbone, of Carbone Smolan Agency in New York, which advises on museum projects throughout the country, including Piano's work in Atlanta. Most museum leaders point out that Piano's exalted status in their community is well-deserved. Directors point to several factors, first among them design, in which Piano creates intimate spaces that elegantly highlight the art inside. A good example is the Menil Collection (1987) in Houston, an intimate glass-and-concrete box whose pristine interiors are flooded with rich layers of light. Such work seems especially popular as the tide begins slowly to shift against flashy "destination" museums that often overwhelm the work inside.

Another factor is that Piano, known for working well with museum officers and coming in on budget with popular designs, has become a sure thing in a field that is often without certainties. James Cuno, director of the Art Institute of Chicago, points out that museum after museum extols his work, charisma, and negotiating ability.

But some feel the choice of Piano is more about playing it safe with a familiar name. Carbone notes that some American architects are getting fed up with what could be called the "knee-jerk" choice of Piano (as well as the recent dominance of other foreign firms in the U.S. museum market, such as Herzog & de Meuron). "You'd like to think there's somebody else out there," he says, pointing to only a handful of American architects getting recent museum commissions, like Frank Gehry, FAIA, and Polshek Partnership. Richard Gluckman, who also submitted a design for the Whitney addition, claimed that the museum had promised him a chance to compete for the commission but changed its mind when Piano came into the picture.

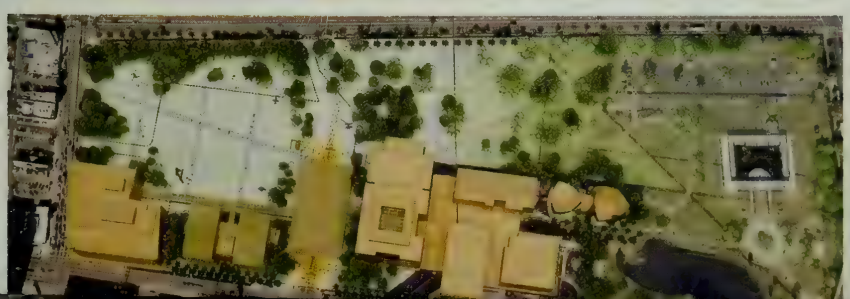
While most admire his work, some architects wonder whether Piano's multitude of U.S. projects will begin to look formulaic, which he says will never happen. "The differences between my buildings are immense," he says, pointing to the LACMA project, which creates a new gardenway as a centerpiece, and the Whitney Museum, which opens up to the surrounding urban environment, as examples. "Some people like to make generalizations, but they're not looking closely enough," he adds. Piano also resents being regarded as a "safe choice." "Making museums that work for art, that are simple, subtle, serene, doesn't mean they are not ambitious buildings," he says.

As for his grip on the U.S. museum market, Piano notes his close work with local firms like Fox & Fowle and Beyer Blinder Belle, and says he has no ambition to monopolize projects. "We are actually very reluctant. We take very little of what is offered to us. I never try to do more than I can." *Sam Lubell*









Piano completed the Nasher Sculpture Center in 2004 (top left). Upcoming projects include additions to the High Museum in Atlanta (top center, at rear), the Art Institute of Chicago (top right), and the Los Angeles County Museum of Art (left), which includes the removal of a parking garage and street to create a new park.



Dramatic expanses always intensify the beauty.

True™ Acoustical Ceiling Panels

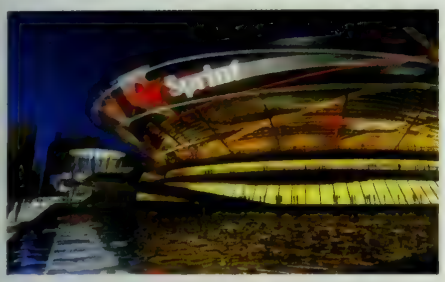
Subtle. Soft. Serene. TRUE™ Acoustical Ceiling Panels from USG are designed with a minimal grid reveal that creates stunning monolithic beauty to dramatize other design elements in the room. And with enhanced acoustical performance, the ceiling is as quieting as it is attractive. For more inspiration, visit www.usg.com or call 877 USG.4200.

USG

©2005, USG Corporation ©iconica/Andre Gallant 2005, all rights reserved

A partnership sours: Ellerbe sues HOK over firm defections

Minneapolis-based Ellerbe Becket says the defection of five key principals from its Kansas City sports architecture office to its rival HOK violated agreements the company had with its staff and with HOK, according to a lawsuit filed on March 16 in Missouri state court. The lawsuit asks a judge in Kansas City to impose damages and issue a court order stopping the five defectors from using confidential information or



Both firms worked on the Kansas City Arena.

interfering with Ellerbe's clients and employees. It also charges the five with breach of contract, interference with a contract, and breach of fiduciary responsibility.

HOK officials could not be reached for comment. Michael Katz, an attorney for Ellerbe, declined to comment while the matter was still in court. According to the lawsuit, St. Louis–based HOK first secretly negotiated with David J. Orlowski, the head of Ellerbe Becket's Kansas City office and chief of sports architecture. The other employees involved—Brad A. Clark, Michael R. Clay, Stephen F. Hotujac, and Michael W. Sabatini—were recruited shortly afterward, the lawsuit claims.

Last October, Ellerbe and HOK started work on the new Kansas City arena project [RECORD, November 2004, page 44], a collaboration that put the two staffs in close contact, claims Ellerbe. The two firms and "other firms involved in the project agreed that each firm would not employ or solicit to employ any employees from the other firms working on the project," the lawsuit states. Nothing was put into writing, however, and the lawsuit suggests the agreement was sealed with a handshake.

After allegedly negotiating with Orlowski, HOK's "raid" grew to include the other principals. Meanwhile, Ellerbe's Kansas City office suffered yet another setback when architect Ron Gans left on March 28 to join 360 Architecture, one of its joint-venture partners in a new Kansas City arena project.

"Ellerbe Becket has depth," says Stuart Smith, company spokesman. "The departure of Ron and the principals will open up new opportunities for promotion." Indeed, in mid-April, Ellerbe announced a slew of internal promotions to bridge the staff shortfall. *Richard Korman/ENR, with additional reporting by Tony Illia*

Goldman halts construction on Lower Manhattan tower

Pei Cobb Freed's 40-story, $2 billion Lower Manhattan tower for investment banking firm Goldman Sachs appears to be in jeopardy. On April 4 the firm halted imminent construction on the project, located on the northwest corner of Vesey and West Streets, contending that it cannot move forward until some unresolved questions about surrounding development are answered.

The prime question, says Goldman Sachs spokesperson Peter Rose, is the location of a planned vehicular tunnel—a result of submerging West Street—that now appears to head under the building's main entrance. The location, says Rose, would be dangerous and inconvenient for pedestrians, and would take away from the building's visual impact. Other issues include questions about the Freedom Tower's design and the configuration of the World Trade Center site as a whole.

The site of the firm's glass tower, which will consolidate its many area offices and provide larger trading spaces, is the last vacant commercial parcel in Battery Park City, set to be located just west of the Freedom Tower. Joanna Rose of the Lower Manhattan Development Corporation says, "We're working hard to address those concerns, and we're confident we will be able to resolve them." *S.L.*

Jets begin moving forward with new stadium

The Metropolitan Transporation Authority on March 31 approved the $720 million sale of its West Side rail yards in New York City to the New York Jets, clearing the first of many hurdles in the team's effort to build its $1.9 billion, 75,000-seat stadium on the site. On April 11, the Empire State Development Corporation, a New York State Agency, also authorized the transaction. *S.L.*



Ice Hotel Sweden

Create dramatic expanses with TRUE™ Acoustical Ceiling Panels from USG, and you could experience another dramatic venue—the Ice Hotel Sweden.

- Grand Prize is an 8-day trip to Sweden, including a night in Ice Hotel Sweden (Winter 2006-07)
- Entries will be accepted from March 1, 2005 through May 1, 2006
- Winners will be announced at NeoCon® 2006
- Visit www.usg-true.com for official rules and entry form

Win the True trip of a lifetime.

Call for Entries

USG

©2005, USG Corporation

Pathways
Architectural Solutions.
Intelligent, sustainable, affordable.

It's a fact. Construction and demolition wastes comprise about 40% of the total solid waste stream in the U.S. But until now, it's been difficult to create aesthetically pleasing, economical spaces without drywall and fixed construction elements. Finally, there's an alternative you and your clients will love. Pathways Architectural Solutions, a complete portfolio of walls, floors and wiring designed to work together. Here are the kind of results you can expect from this flexible interior solution compared to traditional construction.

- Breakeven within 24 months
- 100% reusable — no landfill waste
- 30% less time for initial build-out
- 50% faster reconfiguration
- Pathways Access Floor, with under-floor air, can cut HVAC energy costs 30%
- Up to 70% faster installation of Pathways Modular Power and Zone Cabling
- Pathways Privacy Wall provides acoustics superior to drywall
- Lighting solutions from Lightolier® can produce energy savings of over 50%

To learn more about a smarter way to build for the future, visit us at steelcase.com>products>architectural solutions

Steelcase

Record News





Chill between Koolhaas and Foster could hurt Dallas project

What was conceived as a dream marriage is starting to look like an episode from *Divorce Court*.

In 2001, the Dallas Center for the Performing Arts commissioned Rem Koolhaas's Office for Metropolitan Architecture and Foster and Partners to design its new multiform theater (left) and opera house (right). Center officials touted the collaboration as a provocative union of techno sleekness and messy vitality, and the firms also agreed to work together on a master plan for the public spaces between their buildings. Skeptics pointed out that Foster and Koolhaas didn't care for one another's work, or one another, and that a fruitful collaboration was probably a long shot. It looks like the skeptics may have been right.

Although fund-raising is marching along and both buildings are in design, architects for the two firms rarely turn up in Dallas at the same time, preferring to communicate by e-mail, conference calls, and intermediaries. The situation is frustrating arts-center officials, who complain privately about poor coordination and "once-a-month access" to the decision makers. "We'd all be much happier if the two firms were comfortable sitting in the same room together," says one participant.

OMA's theater is in design development, an 11-story aluminum-skinned cube with a 600-seat performance space at street level and offices, rehearsal rooms, and a café stacked above. The opera house—a glowing red ellipse wrapped in shimmering glass—is further behind, in part because of uncertainty about the size and cost of an exterior sunscreen, which has fluctuated from a restrained eyebrow to a sprawling, freestanding structure covering roughly 4 acres. Further languishing are the streets, plazas, parks, and other public spaces that will connect the cultural monuments. Koolhaas and Foster had lobbied for control over the master-planning process, only to virtually ignore it thus far. After two years, there is still no site plan, and landscape architect Michel Desvigne has presented only a few renderings. The Performing Arts Center is scheduled to open in 2009. *David Dillon*

Proposed resolution would address decline in new licenses

A resolution will be presented at the American Institute of Architects (AIA) National Convention in Las Vegas (May 19–21) that will attempt to address the issue of the decreasing number of people obtaining licenses to practice architecture, and the dearth of data available on the topic.

The number of initial licenses issued nationally was 2,820 in 2002 and 2,470 in 2003, according to the National Council of Architectural Registration Boards (NCARB). The resolution also notes that little state registration data has been made publicly available. Resolution 05-1, sponsored by the AIA California Council, the Boston Society of Architects, and AIA Massachusetts, calls for the AIA and NCARB to work with individual state boards to conduct a survey of newly licensed architects over the past 10 years, to be updated annually. It also calls for the AIA to assess the impact of the decline in the number of newly licensed architects on the profession and on the AIA.

The resolution is, in part, a response to a problem that is especially acute in California, where the number of newly licensed architects declined rapidly in the 1990s, from 1,339 in 1989 to 398 in 2004. John Cary, a member of the AIA California Council board of directors, is presenting the resolution. "This resolution is first and foremost about raising awareness of this potentially fatal trend," Cary says. "Whether the convention delegates pass the actual resolution or not, they will be sending a very clear message about how much the AIA truly values registration." *John E. Czarnecki, Assoc. AIA*


The biggest difference between your office and this one?
You can change this one without a sledgehammer.
Pathways® Architectural Solutions
Walls, floors and wiring that are moveable, sustainable, economical.
Truly, the smarter way to build for the future.
800.333.9939 www.steelcase.com
Steelcase
Do what you do better.

INTRODUCING
WOOD
BALANCED
DOORS



Wood doors that use the renowned
Ellison Balanced Door hardware
and frames are now available.
For information on wood selection
and door design contact our factory.

ellison
Ellison Bronze, Inc.
800-665-6445
www.ellisonbronze.com

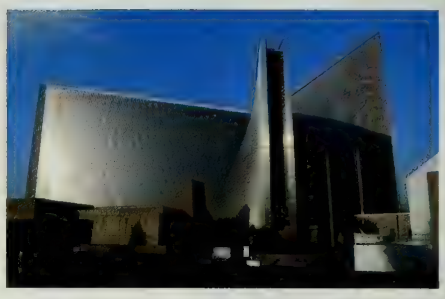
CIRCLE 35 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Pritzker and AIA Gold Medal winner Kenzo Tange dies at 91

On March 22, Japanese architect Kenzo Tange died at age 91. The prolific designer, known for engineering skill and inventive use of materials and forms, will be remembered for his accomplishments both as an educator and as an architect.

Born in Osaka in 1913, Tange studied architecture at the University of Tokyo. He established himself as a field leader with the 1955 completion of the Hiroshima Peace Center, a Modernist masterpiece that memorialized the city's 1945 decimation. Tange's swirling concrete stadium for the 1964 Tokyo Olympics, an engineering marvel, became a symbol of Japan's postwar prosperity. In 1990, Tokyo City Hall, a 48-story pair of towers, became an instant landmark in a city where individual buildings rarely stand out.

Tange received the AIA Gold Medal in 1966, the Pritzker Prize in 1987, and Japan's Praemium Imperiale in 1993. In 1963, he returned as a professor to his alma mater, where his students included Arata Isozaki and Fumihiko Maki. Maki notes: "I think Tange was one of few architects able to create sublime space through the spirit and technology of Modern architecture." *Naomi Pollock*



Tange's St. Mary's Steel Cathedral in Tokyo is stainless steel, with thin limestone-framed windows.

Florida group commissions alternative to "McMansions"

Fed up with the spread of huge, formulaic "McMansions," a Florida group called NAMBIES United (Neighbors Against McMansions: Big Invasive Eyesores) recently juried a competition for a house design that could potentially help replace the behemoth residences going up in their Coconut Grove, Florida, neighborhood. While Coconut Grove isn't known for McMansions, the area's popularity is luring more residents, and developers are beginning to knock down smaller houses, replacing them with lot-dominating ones.



Mateu's design takes advantage of the local climate.

The competition drew 53 entries, and on March 1, local architect Roney Mateu was named the winner for his sleek, white home wrapped around a courtyard. Mateu's 4,500-square-foot, two-level, L-shaped house includes balconies, extremely large windows, long vistas, and a pool with a significant grassy area, all maximizing, says the architect, the area's surrounding environment.

"I believe that people see value not just in square-footage, but in totality of use," says Mateu. "You're outside enjoying the vistas, where the others are in a giant box watching TV."

The 16 organizers/investors now plan to build the new house and sell it on the market. They hope the design will become a model for replacing the now-familiar practice of filling development parcels with huge houses in order to create maximum profit (since land is a fixed cost, the larger the house, the less the price per square foot). "A lot of architects are sick of building these cookie-cutter houses," says NAMBIES United spokesman Andy Parrish. Mateu adds, "I think we are going to see more people demanding this. People will realize they don't really need all this space. Often it's just wasted."

Ironically, NAMBIES United had chosen a 3,000-square-foot design by architect George F. Reed late last year, but later decided his project was too small and involved costly custom woodwork, hence it wouldn't make enough profit.

"We bumped up against the hard realities of building in today's market," says Parrish. "A smaller design doesn't leave you much room for profit."

Mateu's house, which he calls the Casa Onaway (for the street it sits on) is now moving forward, with construction drawings completed, construction set to begin in late May, and completion expected six to nine months later. *S.L.*

Meet the Door with a Split Personality

Power operation only when you need it.
Balanced door operation when you don't.



POWER NOW
Patent Pending

Power Now is a classic balanced door during manual operation, and opens with power only when needed. Our revolutionary design eliminates complicated, unsightly surface mounted hardware. A concealed low energy operator and actuating arm provide opening force on demand. Our standard hardware provides the closing force. When used manually Power Now is pure Ellison.

ellison
Ellison Bronze, Inc.
www.ellisonbronze.com

CIRCLE 36 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

power opens the door on demand, ellison closes it.

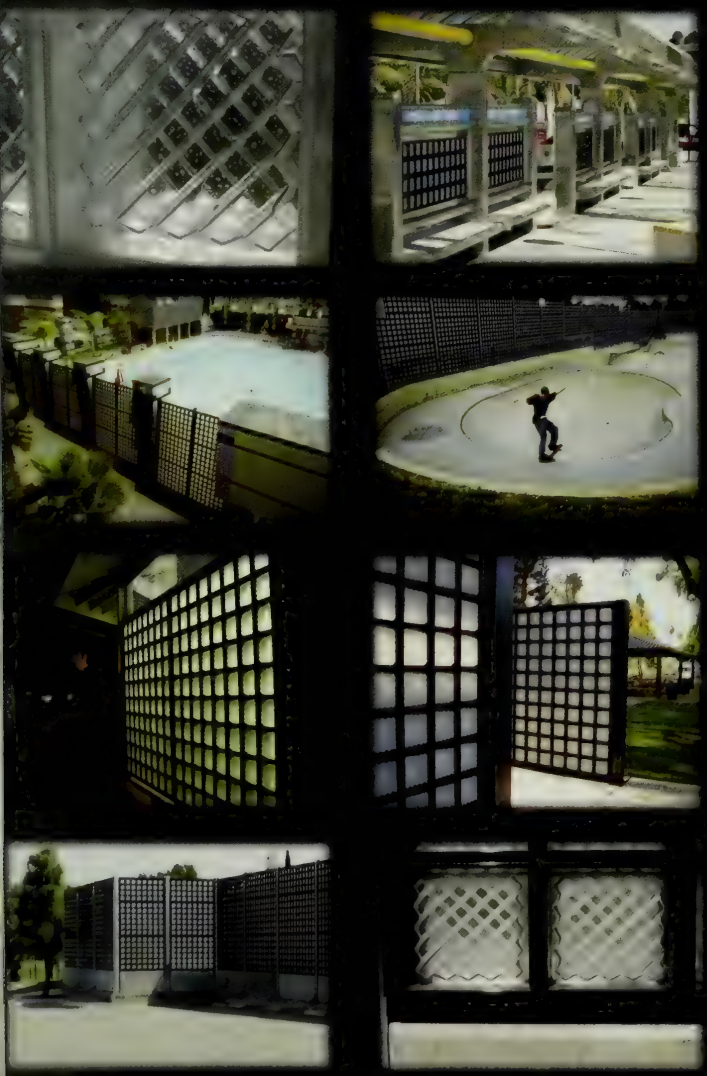


QUILITE® Noise Barriers



QUILITE® is a beautiful solution to noisy problems

- Translucent Noise Absorbing Sound Barriers
- Reduces Echo By More Than 50% Transmitted Noise By More Than 80%
- Durable & Grafitti Resistant, Minimizing Costs
- Both Panel Sides Are Identical Design
- Shipped Complete And Ready To Easily Install
- Integrates Easily Into Architectural Designs



QUILITE® International Noise Barriers
3616 La Tijera Blvd. Suite 509 • Los Angeles, CA 90045
Tel: 310-641-7701 • Fax: 310-641-7768 • www.quilite.com
CIRCLE 37 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

New program to encourage more pro bono work in architecture

For years, the legal and medical professions have offered pro bono resources to the less fortunate. The American Bar Association, for instance, encourages lawyers to each contribute 50 hours a year in free legal counsel and other support. Many firms even have their own pro bono managers.

But while many architects and their firms have been involved with similar efforts, the architecture profession as a whole has mostly stood on the sidelines. Until now.

On March 31, Public Architecture, a nonprofit hosted by San Francisco–based Peterson Architects, launched the "1% Solution," which challenges architecture firms to pledge 1 percent of their billable hours to the public through pro bono work. This works out to about 20 hours a year per employee, and could collectively add up to more than 5 million hours annually, the group says. Pro bono help can include just about anything: design of churches, schools, and parks, and even graphic design support or general consulting.

The fact that architecture has no such organized program at this point was "stunning" to John Cary, executive director of Public Architecture. The new project grew out of his organization's conversations with architects. Cary adds that it focuses on firms rather than individuals, recognizing that firm policies are the key to getting employees involved.

"It's not a solo pursuit," he says, adding that the effort will also help improve firm culture and give younger architects the chance to hone their skills as project leaders and hands-on workers.

A grant from the National Endowment for the Arts has helped Public Architecture launch a Web site for the 1% Solution, www.theonepercent.org, recognizing firms' participation in the program (including school library projects for the Robin Hood Foundation by Tod Williams Billie Tsien with Weiss/Manfredi; the Skyscraper Museum by SOM; and a multifamily residential project in Seattle by Olsen Sundburg Kundig Allen) and providing information and guidance. In the future, the organization hopes to receive support from groups like the AIA and plans to provide case studies of successful pro bono work.

Since launching, the program has enlisted about 35 firms, with about 6,245 hours pledged. The largest firm to commit so far, Glendale, California–based Osborne, has 55 employees, but some larger firms are close to committing, says Cary. Nevertheless, he's a realist, noting that most architecture firms don't have the money to pledge as many resources to pro bono work as more lucrative professions like the law.

"That's why we have a 1 percent solution and law has a 2.5 percent solution," he says. *S.L.*



The program's Web site, www.theonepercent.org (left), tallies total hours pledged, and features pro bono project designers like Weiss/Manfredi and Tod Williams Billie Tsien.


Bollards with adjustable lamp enclosures
for illuminating vertical surfaces
Two sizes available for Ceramic Metal light sources
BEGA sets the standard
For a complete product brochure go
to www.bega-us.com
805.684.0533
Circle No. 149

the ELEMENTS are SIMPLE
CRIMPED TO CURVE
the POSSIBILITIES
are ENDLESS
NEW CATALOG
available now
AIA EXPO 2005 Booth 2927
greenscreen™
800 450 3494
www.greenscreen.com

New York's High Line reveals first look at its new plans





Walkways will blend organic and man-made materials.

The first phase of design has been unveiled for Manhattan's High Line, the 1.5-mile elevated railway destined to become New York's unique new public space.

Hashed out over the past six months by Field Operations and Diller Scofidio + Renfro, the designs were made public on April 20, and are on display at New York's Museum of Modern Art until July 18.

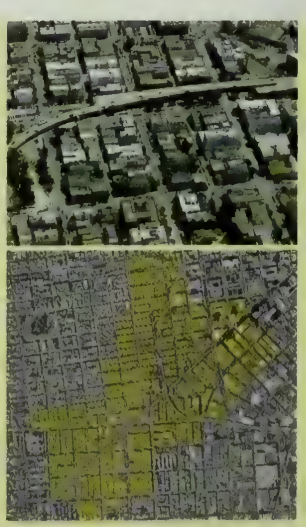
Phase I, which centers on the park's southernmost stretch, from Gansevoort to 15th Street, lays down a framework for the entire project: "Agri-tecture," the blending of organic and man-made materials enjoining a varied system of planked pathways with a diverse array of plant life.

"People will continuously meander through the landscape," explains Field Operations' James Corner. "It allows us to create niches and little hideaways." The planks, made of precast concrete, will have gaps between them where they intersect with green areas, allowing spaces for flora to grow. This will create, says Corner, a "blending between the hard and soft materials—a landscape that isn't a simple division between path and garden."

The concrete paths, 8 to 15 feet wide, will be laid out in a winding flow with numerous splintering tributaries. The plant species chosen for the site should be "able to maintain their shape in all seasons," observes Friends of the High Line (FHL) planning director Peter Mullan, in order to make a continuous visual impression.

Another important feature, says FHL codirector Joshua David, will be the varied points of access onto the High Line. Several entrances will stem from busy intersections, while "slow stairs" will "psychologically divide the street from the structure," Mullan adds. The FHL hopes to begin repairs and remediation of the structure by the fall of this year, with Phases I and II of construction to follow in mid-2006. *Ilan Kayatsky*

Replacing a highway with homes



San Francisco is hoping to exorcise the demons of past urban-planning mistakes with a housing design competition for the site of the former Central Freeway (top right), damaged during the 1989 Loma Prieta earthquake. The competition seeks ideas for nearly 1,000 new housing units on six parcels fronting Octavia Boulevard, a new tree-lined street under construction in the Hayes Valley neighborhood (bottom right) near the city's Civic Center. Two of the parcels will be developed as affordable housing; the remaining four will be sold to developers, who will be encouraged to partner with the winning designers.

The competition, sponsored by the San Francisco Prize—a collaboration between the AIA San Francisco chapter, the San Francisco Planning and Urban Research Association, the San Francisco Museum of Modern Art, and San Francisco Beautiful, a civic organization—also hopes to heighten the design ambitions of the city's infill housing projects, which are often limited by conservative aesthetics. Impetus came from the neighborhood itself and was encouraged by a $55,000 grant from the city. This combination of government and local support makes this competition "more than just a hypothetical exercise," says Margie O'Driscoll, executive director of AIA San Francisco, noting, "It's amazing that the neighbors came to us." *Andrew Blum*

CIRCLE 39 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Even through the fiercest of storms,

there is a calm that endures.



build for life

www.kawneer.com

architectural aluminum systems • entrances and framing • curtain walls • windows

Kawneer
An Alcoa Company

ALCOA

KUSSER AiCHA Graniteworks USA

Design with Natural Stone

Making the Impossible Reality!



- Original KUGEL Floating Ball
- Floating Objects
- Monumental Works of Art
- Granite Fountains, Waterwalls
- Natural Stone Elements
- Prestressed Granite
- Custom Design
- Complete Engineering Support



800-919-0080
www.kusserUSA.com
kusserUSA@kusser.com

Magdeburg, Germany
Axis: Nero Assoluto granite, polished
Disc: Balmoral granite, honed
Scale 1:1,000,000
Artist: Timm Ulrichs, Münster, Germany

Polar Axis of the Earth

CIRCLE 40 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Conference examines architecture's threat to birds

By some estimates, collisions with buildings, bridges, towers, and other man-made structures claim as many as a billion birds annually in the U.S. alone. In mid-March, architects, building managers, public officials, conservationists, and ornithologists met in Chicago to discuss the huge toll the built environment exacts on the bird population.

Touted as the first conference devoted to the topic, "Birds & Buildings: Creating a Safer Environment" was hosted by the Illinois Institute of Technology. The conference provided a primer on bird behavior, highlighted "best practices" in design and operations, and fostered networking and brainstorming. Cosponsors included the Bird Conservation Network, the Audubon Society, AIA Chicago, and BuildingGreen.



Lighting rules in Chicago mitigate the Sears Tower's threat to fowl.

Many birds migrate at night and are easily thrown off course (and into buildings) by artificial lights. Chicago, Toronto, and other flyway cities promote migration season "lights-out" programs, which have proved effective and cost-saving.

The major daytime killers are transparent and reflective surfaces. "The evidence is overwhelming that birds act as if they do not see clear and reflective glass as a barrier," says Daniel Klem, an ornithologist at Muhlenberg College, in Allentown, Pennsylvania.

Measures discussed at the conference, like sunshades, drapes, or artwork, can provide visual cues, as does netting. Thermal coatings and fritted glass can also prevent bird collisions while cutting energy use.

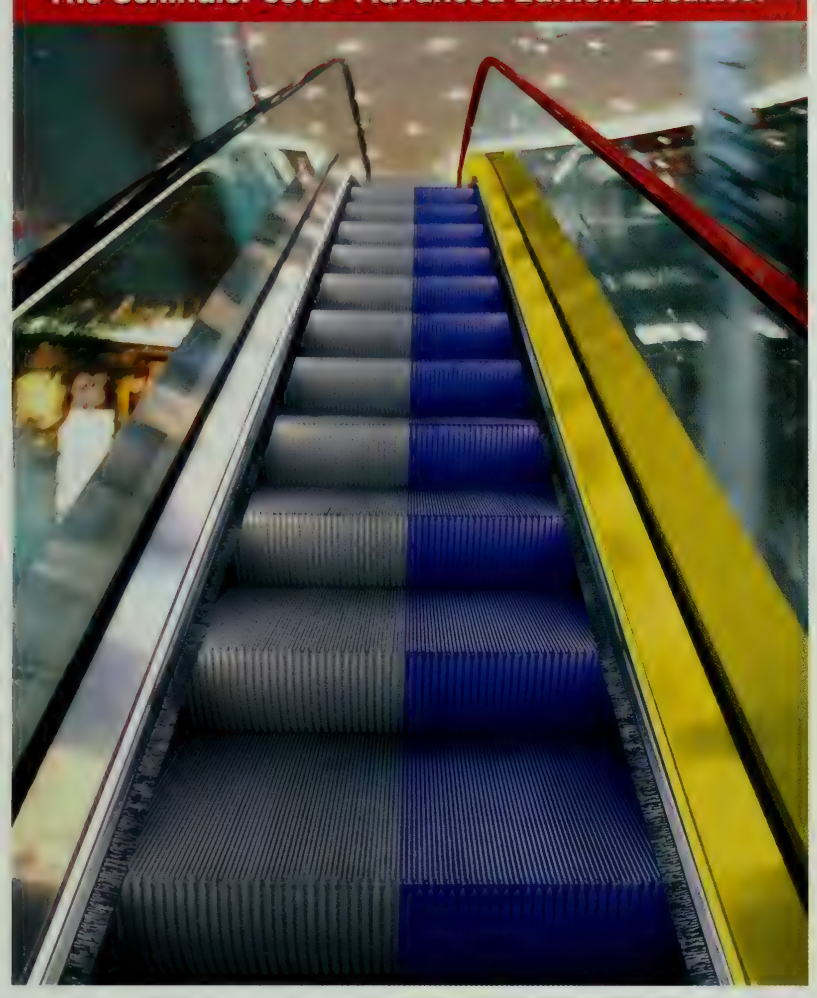
Clients tend to be unaware of the problem, says Bruce Fowle, FAIA, principal at Fox & Fowle Architects in New York, "unless they happen to own a building where there is a severe problem with bird collisions."

Science may hold the answer, according to Fowle. "The ultimate solution is to develop a cost-effective, nonreflective glass with a wavelength, such as ultraviolet, that birds can see and we can't," he says.

Addressing this issue along with other environmentally sensitive design approaches can be a challenge, since the dictates of historic preservation and green building don't always align with bird-safe design, says conference organizer Randi Doeker, president of the Chicago Ornithological Society. "It's probably a little easier to work out, because nobody wants dead birds in front of their buildings," she says. "And like all of these things, the sooner you do it, the easier it is." *Ted Bowen*

Grimshaw takes Queens Museum commission

Nicholas Grimshaw has replaced Eric Owen Moss to renovate the Queens Museum, the historic former New York pavilion in the 1939 and 1964 World's Fairs in New York City's Flushing Meadows-Corona Park. Moss, who was dismissed after producing two redesigns of his original scheme, was the December 2001 winner of the first national design competition held by the New York City Department of Design and Construction (DDC). Grimshaw, in collaboration with local firm Amman & Whitney, was selected from a group of architects, including Fox & Fowle and SOM, who have standing contracts with New York City under the DDC's Design Excellence Program. Says Tom Finkelpearl, executive director of the museum since 2002, "We've been through a process of self-examination as an institution. We're not looking for an instant design at the beginning, but someone we're comfortable with in the process." Andrew Whalley, director of Grimshaw's New York office, notes, "The museum's objectives are different from their earlier work; the emphasis now has very much to do with the existing integrity that the building has. It's a robust structure that's stood the test of time." The museum plans, as before, to begin construction in 2007 and reopen in 2009. Finkelpearl adds, "We're not starting from zero." *Thomas de Monchaux*



Show off your colorful side.

Brilliant, unlimited color has arrived. Now Schindler offers color where it's never been before – skirts, decking, cladding, handrails, balustrades and even steps. An unlimited variety of colors will maximize your style options and enhance your environment. It's truly color in motion.

Add to this, the most advanced technology, including more than two dozen safety features, plus ease of installation and automatic drawing software and you have the Schindler 9300® Advanced Edition escalator. Schindler has always been the standard of performance. Now they're the standard for beauty. That, you can be sure of.

For all the colorful details e-mail Schindler at uswebmaster@us.schindler.com

Schindler

The Elevator and Escalator Company

(973) 397-6500 | **www.us.schindler.com**

CIRCLE 41 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

See us at AIA Expo2005 Booth 452

Schindler



chill™

V35
designed by frog

landscapeforms
800.430.6208 landscapeforms.com

CIRCLE 42 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

UCSF's Mission Bay campus attracts long list of architects

Architects who come to San Francisco with ambitions beyond bay windows tend to get discouraged. But that doesn't appear to be the case at the new Mission Bay campus of the University of California, San Francisco, now rising on 43 acres of landfill and former rail yards just south of the city's downtown.

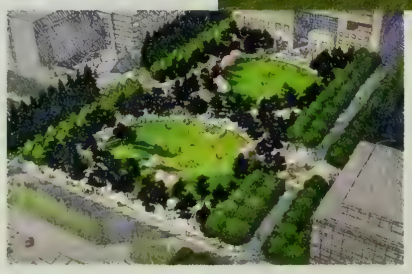
The campus has an ambitious design agenda, stemming from the need to attract faculty away from the main UCSF campus across the city, as well as the University of California's sense of civic obligation. The result—just now taking visible shape—is part architectural petting zoo, part reimagining of what an urban university campus can be.

At full build-out, expected around 2020, the Mission Bay campus will include 2.65 million square feet of space, constructed at a cost of $1.5 billion, accommodating nearly 10,000 people working and studying in the sciences. The campus anchors the larger redevelopment of the 303-acre Mission Bay area into a mixed-use neighborhood, mostly targeted at the biotech industry. On the UCSF campus, a striking list of architects is at work, including Cesar Pelli, FAIA, Ricardo Legorreta, Bohlin Cywinski Jackson, Rafael Viñoly, FAIA, Peter Walker, STUDIOS, Stanley Saitowitz, EDAW, NBBJ, Smith Group, and Skidmore, Owings & Merrill. Each is following a master plan developed by Machado and Silvetti.

These days, the Mission Bay campus still looks like a downtown in Iowa, with bulky buildings dropped into a flat, open expanse. Genentech Hall, the first major academic research building, designed by ZGF and Smith Group, opened in January 2003; it was followed a year later by another lab building, Arthur and Toni Rock Hall, designed by Cesar Pelli. Both began to enliven the campus—and, crucially, increase its popularity among the initially wary transplants from the main UCSF campus—while major construction continued. This summer, the pace increases with the opening of four major buildings. The $85 million, 165,000-square-foot community center designed by Ricardo Legorreta, serves as the focal point of the quad, with candy-colored walls and a symbolic campanile. Craig Hartman, FAIA, of the San Francisco office of SOM, has designed a $112 million residence, with four narrow slabs surrounding a central courtyard. Bohlin Cywinski Jackson's $97 million, 152,000-square-foot research building adjoins Genentech Hall. And Stanley Saitowitz's $23 million parking structure leverages its central location to be a campus icon, with a channel-glass facade that resembles a DNA barcode. The buildings surround a pair of public spaces designed by Peter Walker and Partners, including a large grass quad and a paved plaza lined by retail, with a towering Richard Serra sculpture at its center.

Steve Wiesenthal, associate vice chancellor of facilities management and major projects at UCSF,





Pelli's Arthur and Toni Rock Hall (above). Walker's greenspace plans for the area (left).

Mission Bay explains that the diversity of campus architecture is meant to reflect how scientists and students come together, with "a loose framework, but a variety of perspectives and backgrounds." Accordingly, Machado and Silvetti's campus plan dictates a consistent cornice height of 85 feet and emphasizes pedestrian connections between buildings and between the campus and the surrounding area, which currently consists mainly of vacant lots. But within that plan, each architect's unique expression has been encouraged. "The big question, adds Wiesenthal, is "how do we achieve a sense of individual identity for people, programs, and buildings within an overall unity?"

For San Francisco, the opening of the new buildings marks the next step in the long-awaited development of Mission Bay. "It's a whole new reality that the center of the city is moving south—which is a good thing, because downtown is largely built-out," says Jim Chappell, president of the San Francisco Planning and Urban Research Group. "I just wish the development were more urban. It has the feel of an office park, not a city street." *Andrew Blum*



Not every building is super complex, or shaped like a lug nut. That's why we offer scalable solutions to fit your specific construction or retrofit needs. A leader in systems integration and technology contracting, we have the dedicated system specialists to provide you with the flexibility, speed and responsiveness you demand. So even if you fall a little short of needing an army, we won't fall short meeting your needs. To find out more, call 1-800-972-8040, ext. 595.

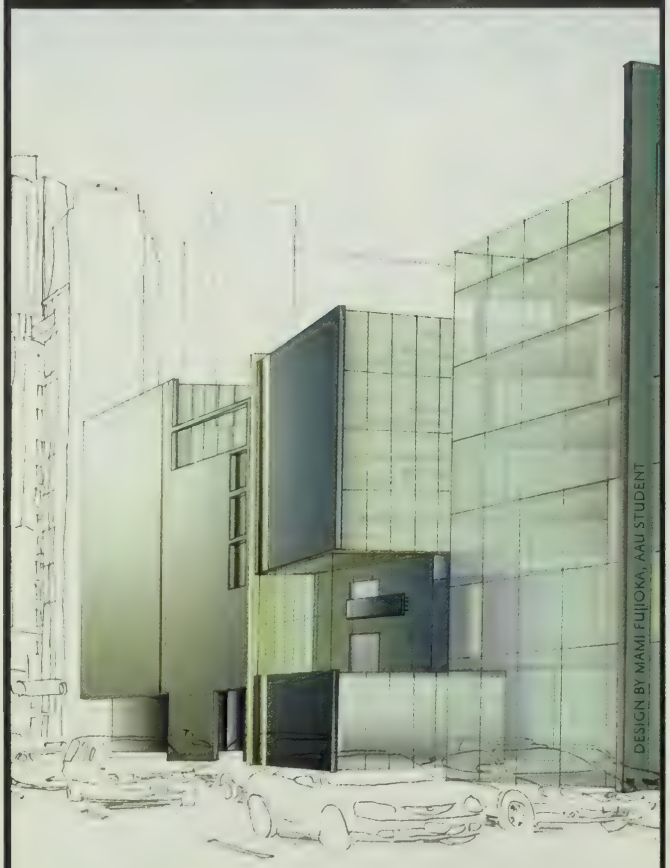
CONSTRUCTION | SERVICE | FACILITY MANAGEMENT | FIRE ALARM & SECURITY | TECHNOLOGY | SYSTEMS INTEGRATION | ENERGY

JOHNSON CONTROLS

www.johnsoncontrols.com

CIRCLE 43 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

SCHOOL OF ARCHITECTURE
MASTER OF FINE ARTS



PROGRAM IN ARCHITECTURE

ARTISTIC | EXPERIENTIAL | ENVIRONMENTAL
TECHNICAL | PROFESSIONAL | ENDURING

REGISTER NOW FOR SUMMER & FALL SEMESTERS

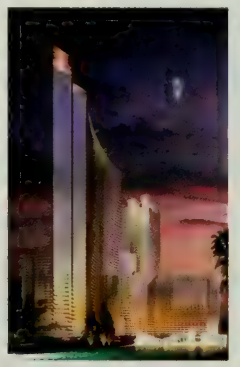
ACADEMY of ART UNIVERSITY
FOUNDED IN SAN FRANCISCO 1929

1.800.544.ARTS | WWW.ACADEMYART.EDU
79 NEW MONTGOMERY ST., SAN FRANCISCO, CA 94105
NATIONALLY ACCREDITED BY ACICS, NASAD & FIDER (BFA, MFA, AD)

CIRCLE 44 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Pelli's hotel-casino on Las Vegas strip will be centerpiece of massive development

The Las Vegas Strip is getting a sleek new architectural addition from Cesar Pelli & Associates, which is designing a 4,000-room hotel-casino (right) that will serve as the centerpiece of MGM Mirage's $6 billion Project CityCenter development (see page 196).

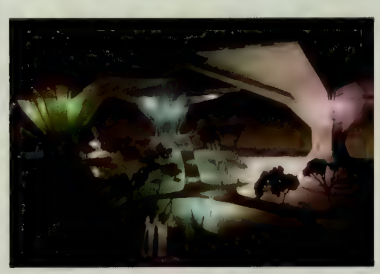


Early plans call for two 60-story glass towers with panoramic views of the Strip. The nonthemed resort will also house a 150,000-square-foot casino, 15 to 20 restaurants, and a 2,000-seat theater for a Cirque du Soleil production. MGM Mirage executives expect the project cost to reach $2.5 billion.

Pelli's project will anchor the 8-million-square-foot Project CityCenter, launched in November. Situated on 66 acres, between the Bellagio and Monte Carlo resorts, the development will include three 400-room hotels, 550,000 square feet of shops, dining, and entertainment venues, and 1,650 units of hotel-condominiums and private residences. Ehrenkrantz Eckstut & Kuhn Architects is the master-plan designer. The pedestrian-oriented environment, with public squares, covered passageways, and rooftop gardens, is scheduled to break ground next year, and finish its first stage by 2010. *Tony Illia*

Behnisch's "Senscity" project will provide a lush complex in the desert

A new urban oasis may soon come to the Las Vegas desert. Stuttgart-based Behnisch, Behnisch & Partner is designing a 150-acre, mixed-use park that combines toy galleries and entertainment venues with landscaped gardens and children's playgrounds.



The project, dubbed "Senscity Paradise Universe," will be a sustainable, energy-efficient environment consisting of terraced green areas, an artificial lake, and meandering paths. The site will also include family-oriented restaurants, theaters, and auditoriums. Natural barriers will separate the lush development from its dry surroundings.

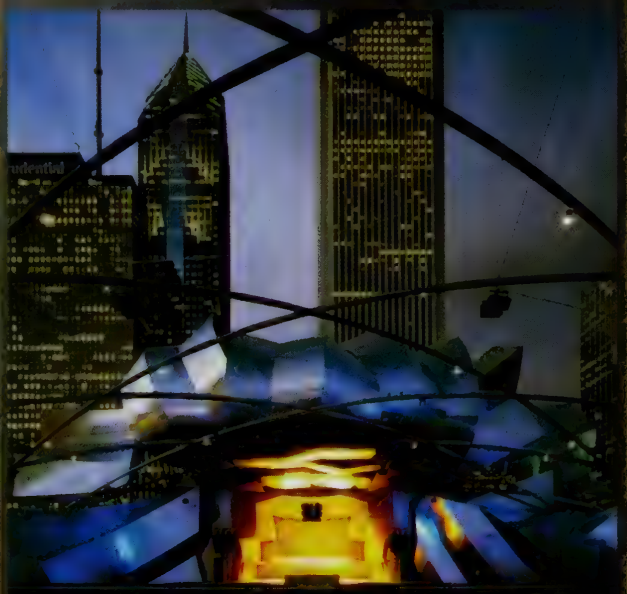
Giant flowerlike structures (left) measuring up to 120 feet tall and 300 feet wide, will line the park paths, providing shade and cool-air relief. The structures will be built from prefabricated lightweight metal frames and posttensioned fabric. Evaporating water on their leaves will cool the park's air while creating downdraft airflows. The leaves can additionally be used as energy collectors, transforming radiation into electricity or heat during winter months. The project's development consortium is still finalizing the project's site, and the plan has received preliminary approval from Clark County, says Behnisch principal Christof Jantzen, AIA. Construction is expected to take three years. *T.I.*

www.colorker.com

VISIT US at the Tile of Spain Pavilion at AIA, Las Vegas, May 19-21, Booth #4046.

CIRCLE 45 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

A WORK OF ART
THAT ACTUALLY WORKS



Pritzker Pavilion, Millennium Park - Chicago

THEATRE PLANNERS
LIGHTING DESIGNERS
Schuler Shook

Chicago 312-944-8230
Minneapolis 612-339-5958
Dallas - Fort Worth 817-461-5442

schulershook.com

CIRCLE 46 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Plan envisions new Vegas center, away from the Strip

Downtown Las Vegas is expanding, becoming a dense urban core brimming with amenities and architecture, steering the image of the city away from the glitzy casinos that line the Strip.

In 2004, city officials selected The Related Companies to develop 61 acres once operated by the Union Pacific Railroad, about 5 miles northeast of the Strip. Boston-based Elkus Manfredi Architects designed the master plan, which calls for a new city hall, performing arts center, baseball stadium, 8.7-acre medical campus, and residential, retail, and office space.

The performing arts center abuts the city hall's adjacent park, creating a strong central axis. Office buildings ring the central plaza, and 3,000 housing units fill out the urban plan. Parking will be hidden from view by placing garages behind buildings and major lots at the edge of downtown. Visitors will be encouraged to stroll the sidewalks, stop to eat at restaurants, and browse the shops. Taking advantage of the climate, extensive landscaping will enhance the outdoor experience.

According to Marty Burger of The Related Companies, the city hopes to complete the development in 2008, when, says Howard Elkus of Elkus Manfredi, "it will become the new iconic heart of downtown Las Vegas." *Larissa Babij*

Arquitectonica designing two new projects on Las Vegas Strip



New York developer Ian Bruce Eichner recently unveiled plans for a new $1.5-billion, mixed-use hotel-casino-condominium project designed by Miami-based Arquitectonica on the Las Vegas Strip. Situated on 8.5 acres adjacent to the Bellagio, the "Cosmopolitan Resort & Casino" is scheduled to break ground in early 2005.

The 4-million-square-foot undertaking will consist of two 53-story aquamarine glass towers housing 2,400 time-share, condominium, and hotel units, ranging from 600 to 900 square feet in size. Paul Duesing Partners is the interior designer. There will also be a 70,000-square-foot casino, a 1,800-seat theater, and a 150,000-square-foot convention and meeting-room area.

The new development's twin, 600-foot-tall perpendicular buildings will be connected by a five-story low-rise with 300,000 square feet of space for retail shops, restaurants, and entertainment. The Cosmopolitan will be a "hip, boutique property," says Eichner, who also developed New York's Manhattan Club at 200 West 56th Street. The new project will have 400 feet of Strip frontage and a four-level, 3,000-space underground parking garage. It is scheduled to open by early 2008. *T.I.*

IMAGES: COURTESY ELKUS MANFREDI ARCHITECTS



Zephyr MB1929LMPN

The
MICHAEL BERMAN
BATH COLLECTION

This unique collection, created exclusively for ROHL by legendary interior, furniture and restaurant designer Michael Berman, is inspired by the finest in 1920s and 30s industrial design. His "American Transitional" design seamlessly blends the traditional with the modern, integrating itself into a variety of architectural styles for a bold yet elegant design statement.

New York · San Francisco · Newport Beach · Milano
1.800.777.9762 · www.rohlhome.com
Sold exclusively through fine decorative plumbing and hardware showrooms nationwide.

ROHL
The Experience of Authentic Luxury™

CIRCLE 47 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



nextBOX challenges idea of "custom homes"

Las Vegas–based assemblageSTUDIO has designed nextBOX, a residential project in Henderson, Nevada, just outside of Las Vegas. Planned for a gated community where Spanish-style houses are the norm, the proposal challenges the developer's desire for "true custom homes."

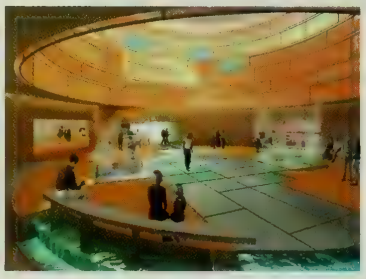
The proposed 3,500-square-foot residence comprises two masses. The larger one is a "great room" containing a living area and theater. The second includes two bedrooms and wraps up above the first, creating a "loftlike condition" as the bedrooms look into the great room. The exterior will be clad in charcoal zinc paneling, bent in places to create an organic shadow effect on the house.

The home was originally slated for construction this August or September. However, the owner has filed a court appeal against the developer, who has denied the design, despite the fact that it meets all of the developer's guidelines.

"We feel it really comes down to matter of taste," says design architect Eric Strain. He adds, "The residential market for custom single-family homes hasn't really matured to the point where people want to create homes about who they are and how they really live." *Audrey Beaton*

Vegas to convert old water springs site into nature preserve park

Las Vegas, which means "meadows" in Spanish, is transforming a neglected water springs site, about 2 miles northwest of the Strip, into a nature preserve park. The 180-acre area is considered the city's birthplace, having provided the valley with water. After the springs dried up, however, the area fell into disrepair and faced being paved over as a freeway. Archaeological discoveries ultimately rescued the site, and local leaders have since launched a $200 million effort to restore the area, creating an urban central park with low-water desert gardens, sustainable demonstration buildings, recreation trails, and a wetlands area.



The preserve's Visitors Center's interior.

Locally based Lucchesi, Galati Architects is designing a five-building, 54,000-square-foot Desert Living Center on the site to be built from earth-rammed walls and straw-bail construction, with angled roofs that collect rainwater for irrigation and wastewater management. Tate Snyder Kimsey Architects of Henderson is designing a two-building, 75,000-square-foot Visitors Center that uses weathered steel siding, lime-based plaster, and recycled glass. The project, overseen by the Las Vegas Valley Water Authority, is scheduled to open in late 2006, and seeks the highest possible LEED ratings. *T.I.*

SatinTechTure™
an Arrangement Etched in Glass

Beauty and flexibility mean as much to the architect as the jazz musician.

SatinTechTure, Bendheim's exclusive new line of architectural glass, provides extraordinary elegance and design flexibility.

SatinTechTure etched glass styles can enhance a variety of architectural designs for commercial, retail, and residential applications. Whether the approach is traditional or contemporary, pragmatic or elegant. The crisp refined designs offered within the SatinTechTure line encompass both architectural and organic types.

Maintenance-Friendly.

Bendheim's exclusive etching process produces a permanent surface which prevents the absorption of grime, resists staining, and makes the glass easy to clean.

Now in stock for immediate delivery, SatinTechTure is available in tempered and laminated forms.

BENDHEIM since 1927
www.bendheim.com
See us at Booth #847
Bendheim East 800-835-5304
Bendheim West 888-900-3064

New York Showroom
212-226-6370



CIRCLE 48 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

small | quiet | precise | new



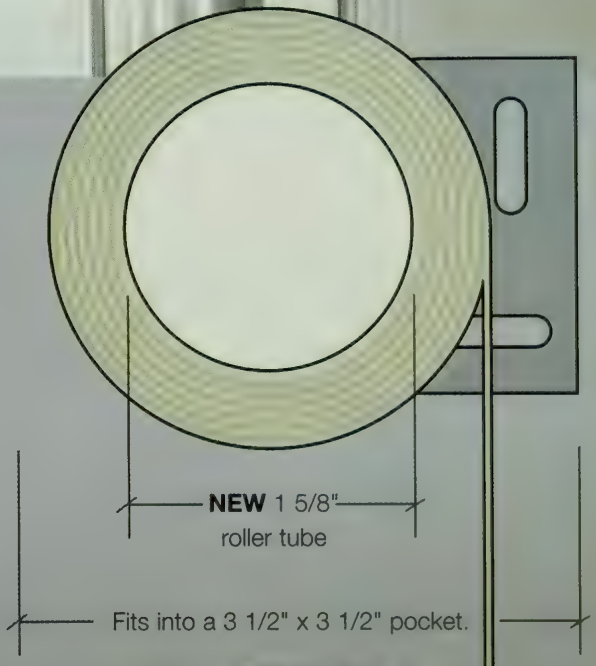
NEW Sivoia QED™ | roller 64™

Quiet, controllable precision shades to fit any window.

Adjust shade position at the touch of a button for effortless control of sunlight.

- minimize glare
- provide privacy or view as desired
- protect furnishings from sun-damage
- integrate with electric lighting controls
- easily installs inside shallow window jambs

For more information on the Sivoia QED family of precision drives for roller shades, draperies and Roman shades call **1.877.258.8766** ext. **531** or visit **www.lutron.com**.



LUTRON
Lutron controls your light..

© 2005 Lutron Electronics Co., Inc.

CIRCLE 49 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

It's true! It will make a permanent change in the way you design.

Whether you're building or designing...

- *Schools & Universities*
- *5-110 Story Commercial or Residential*
- *Large Renovation Projects*
- *Hospitals & Hotels*



arriott 3rd Avenue, New York City



New Jerusalem Cathedral, NY



7 Skyline, Virginia



Bradley Hall, Rutgers University



New Jersey Institute of Technology

LENDERWALL® is available worldwide from the finest architectural precasters through Easi-Set Industries, licensor of precast concrete products worldwide.

Easi-Set Industries is a wholly owned subsidiary of Smith-Midland Corporation, a publicly traded company.

Call today for literature and design manual.

EASI-SET® INDUSTRIES

Midland, Va 22722 • 1-800-547-4045

www.easiset.com • info@easiset.com

SLENDERWALL®

Architectural Precast Concrete/Steel Stud Building Panels

News Briefs

Morphosis dropped from Grand Avenue project The developer The Related Companies has decided to drop Morphosis from its $1.2 billion Grand Avenue project. The housing and retail development, announced last year, is estimated to include about 3.2 million square feet in a key cultural and civic area of downtown Los Angeles. According to Bill Witte, principal at The Related Companies of California, Morphosis, the Santa Monica design firm led by 2005 Pritzker Prize winner Thom Mayne, has a "different design vocabulary than what the Related team is trying to do with the project." Witte says other options include Frank Gehry. Phone calls to Gehry's office were not returned. *A.M.*

British poll gives architects low happiness ratings The 2005 "Happiness Index" compiled by City & Guilds, a U.K.-based group established in 1878 to encourage education and training in and for the workplace, has revealed some surprising statistics. Only 2 percent of architects enjoy their jobs, just 1 percent below civil servants, while hairdressers top the happiness league, with 40 percent claiming to be extremely happy in their work. Hot off the heels of hairdressers are chefs (23 percent), beauticians (22 percent) and plumbers (20 percent). *Lucy Bullivant*

Deal saves much of Plaza Hotel New York's Plaza Hotel has set an accord to save 348 of its 805 rooms, as well as its Grand Ballroom, Palm Court, and Oak Bar. The future of these spaces had been in jeopardy when the Plaza's new owner, Elad Properties, had originally planned to save only 150 rooms, converting the rest to condos. *S.L.*

Blanton Museum to open in 2006 The Blanton Museum of Art at the University of Texas at Austin has announced plans to open its new, two-building complex beginning in February 2006. The museum, designed with a traditionally inspired exterior by Kallman McKinnell & Wood Architects, will include a main gallery, a visitor pavilion and education facility, and a public plaza and gallery. *S.L.*



A rendering of Blanton Museum gallery.

Mudslides damage Frank Lloyd Wright's Ennis-Brown House
Restoration of Frank Lloyd Wright's Ennis-Brown House suffered a recent setback when mudslides damaged the 1924 Mayan-inspired structure. The concrete-block home, perched in the Hollywood Hills, was donated by its owners, Mabel and Charles Ennis, to the Trust for Preservation of Cultural Heritage in 1980. The trust has been working to return the home to its original grandeur, but the 1994 Northridge earthquake caused extensive structural damage to it, and torrential rains in late February resulted in mudslides, which caused its retaining walls to partially crumble. While the trust has received a $2.3 million federal grant for the work, repairs are estimated ultimately to cost a total of $4.1 million. The famed home has been closed since December of last year for renovation and is not expected to reopen until late this summer. The structural engineering firm of Melvin Green & Associates is overseeing the repair. *T.I.*



Damaged Ennis-Brown House.

It's easy being green.

Powder coating produces no volatile organic compounds (VOCs) in the application process, and powder coated products do not give off VOCs in use on the job or when recycled. Life cycle costs are as superior as the finish, which offers advantages over liquid paint, anodizing, PVDF or Kynar 500®. Powder coating works on almost any type or size substrate and comes in 10,001 colors, glosses, textures and effects, including green. Want sustainable buildings and low-emitting products and materials? Specify powder coating.

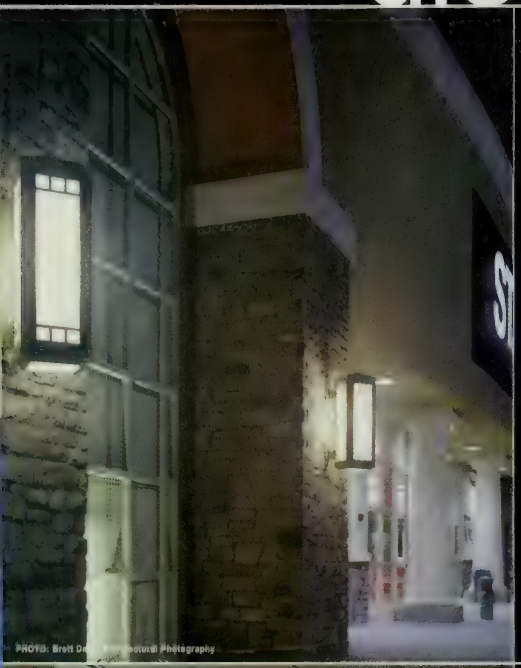
www.powdercoating.org/101

The Powder Coating Institute
Phone 800-988-COAT, 703-684-1770 • FAX 703-684-1771
The Powder Coating Institute (PCI) is a non-profit organization that promotes the application and utilization of powder coating.

POWDER COATED TOUGH®

CIRCLE 51 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

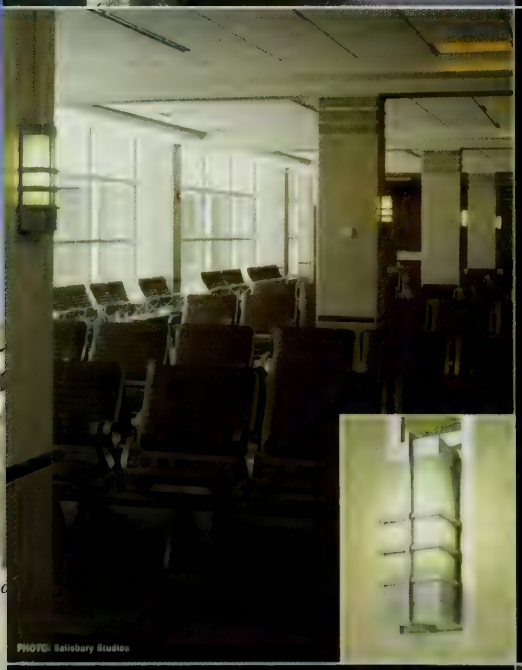
designed for distinction



Modified

Riverside series exterior sconces with custom panel design and custom powdercoat color.

Creekside Marketplace, San Marcos, CA
Smith Consulting Architects



Custom sconces with aluminum bar detail and custom color diffuser.

Dane County Regional Airport,
Madison, WI
Architectural Alliance,
Schuler & Shook Lighting Designers

When standard products are not an option, turn to Manning Lighting for a look of distinction.

CIRCLE 52 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PO BOX 1063
SHEBOYGAN, WI 53082
920-458-2184 P
920-458-2491 F
manningltg.com

MANNING LIGHTING

News Briefs

OMA's Dutch Embassy in Berlin wins E.U.'s Mies van der Rohe Prize OMA has received the Mies van der Rohe Award 2005—the European Union's Prize for Contemporary Architecture—for its design of the Dutch Embassy in Berlin. The award is presented every two years by the European Union and the Fundació Mies van der Rohe, Barcelona, to acknowledge high-quality architecture in Europe. The jury, chaired by Zaha Hadid, felt that the building was a powerful reworking of the notion of an embassy, and noted that an exceptional element was the spiral staircase with views framing the city. A sophisticated use of materials and visual effects revealing its context were also mentioned. *L.B.*

Libeskind to design unusual residential tower in Kentucky



The Ascent's unusual crescent shape.

Covington, Kentucky's waterfront will be radically altered by a crescent-shaped high-rise designed by Daniel Libeskind. The 21-story curved-glass residential tower, located along the Ohio River, will have 80 condominium units, plus retail space and an urban plaza. Called The Ascent, it is situated on 1 acre near John Roebling's famous 1866 suspension bridge connecting Ohio and Kentucky. The building's sweeping lines mimic the bridge. "This building, while Modern in design, is based on shapes that reflect the history and landscape of Greater Cincinnati," said Libeskind in a statement. "Yet [it] calls to mind the possibilities that lay ahead." The $40 million project, developed by Corporex, is scheduled to break ground this summer and should be completed by 2007. *T.I.*

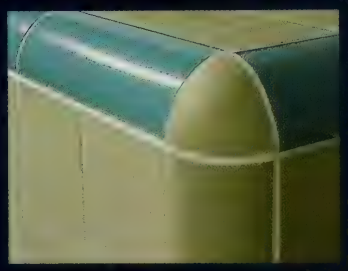
ENDNOTES

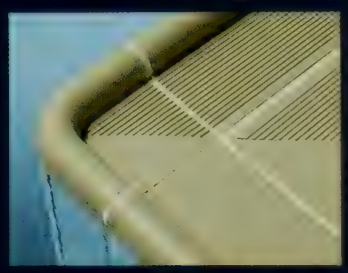
- The California Building Standards Commission voted to rescind an earlier state decision to adopt the NFPA 5000 Building Code. Instead, it will employ the NAHB-supported codes published by the International Code Commission, used extensively throughout the country.
- Construction is under way on Renzo Piano's New York Times Building in Manhattan.
- Rick Buckley, FAIA, a partner at NBBJ, died on January 1 at age 51.
- Architects Paul Byard and John Pinto have been awarded 2005 Guggenheim fellowships.











SAFETY

Gres de Aragón

Ctra. Escatrón, km.9 - 44600 Alcañiz (Teruel) Spain - tel. (+34) 978 830511 fax (+34) 978 833003 - gresaragon@gresaragon.com - www.gresaragon.com

Visit us at the Tile of Spain Pavilion at AIA, Las Vegas, May 19-21, Booth #4046.

CIRCLE 53 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Welcome to the Slate of the Art.

After a century of setting and surpassing the highest standards in the roofing industry, CertainTeed presents its crowning achievement: Centennial Slate.™

Based on a new, patent-pending technology that allows color to be applied to each tab individually with a precision previously found only in nature, Centennial Slate replicates the true look of blended slate with uncanny accuracy, but at a fraction of the cost.

Centennial Slate is the first in a new generation of asphalt roofing shingles made possible by this color application system. But given CertainTeed's history of product innovation, you can be sure it won't be the last.

For more information, call 1-800-233-8990 or visit www.certainteed.com

CENTENNIAL*SLATE

CertainTeed



100 CertainTeed Since 1904 100

Celebrating a Century of Building America

Color shown: Centennial Slate Fieldstone

© 2004 CertainTeed Corporation

Made under U.S. Pat. 5,287,669; 5,400,558; 5,421,134; 5,426,902; 5,501,056; 5,660,014; 6,951,809; 6,955,951; 6,237,288; 6,301,868; 6,523,316; 6,715,252. Other pat. pend. in the U.S. and Canada

CIRCLE 54 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

MEET EXPECTATIONS WITHOUT COMPROMISE.

green smart

You can rely on Sherwin-Williams to help you meet your green coating specifications and satisfy all your quality expectations. And to help you identify our environmentally preferable coatings that provide maximum performance, we've developed the GreenSmart symbol. Products carrying this mark meet our highest standards for air quality, VOC emissions, life cycle cost efficiency, durability, color, and coverage. So with GreenSmart, you'll never have to compromise to meet all your requirements.

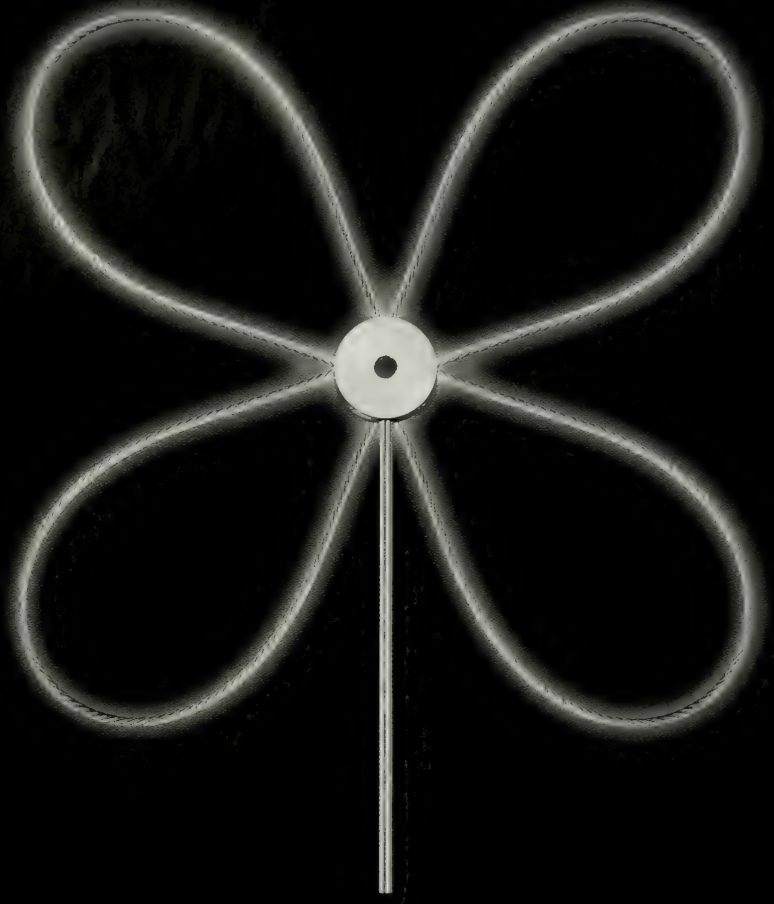
SHERWIN WILLIAMS.

See your Sherwin-Williams Architectural Account Executive or call our Architect & Designer Answerline at 1-800-321-8194.



www.sherwin-williams.com
©2005 The Sherwin-Williams Company

CIRCLE 55 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Green

Carl Stahl®
DÉCORCABLE
The Best InTension™

I-SYS ®
Stainless Steel
Cable and Rods

X-TEND ®
Flexible
Stainless
Mesh

MCS ®
Cable
and Rod
System

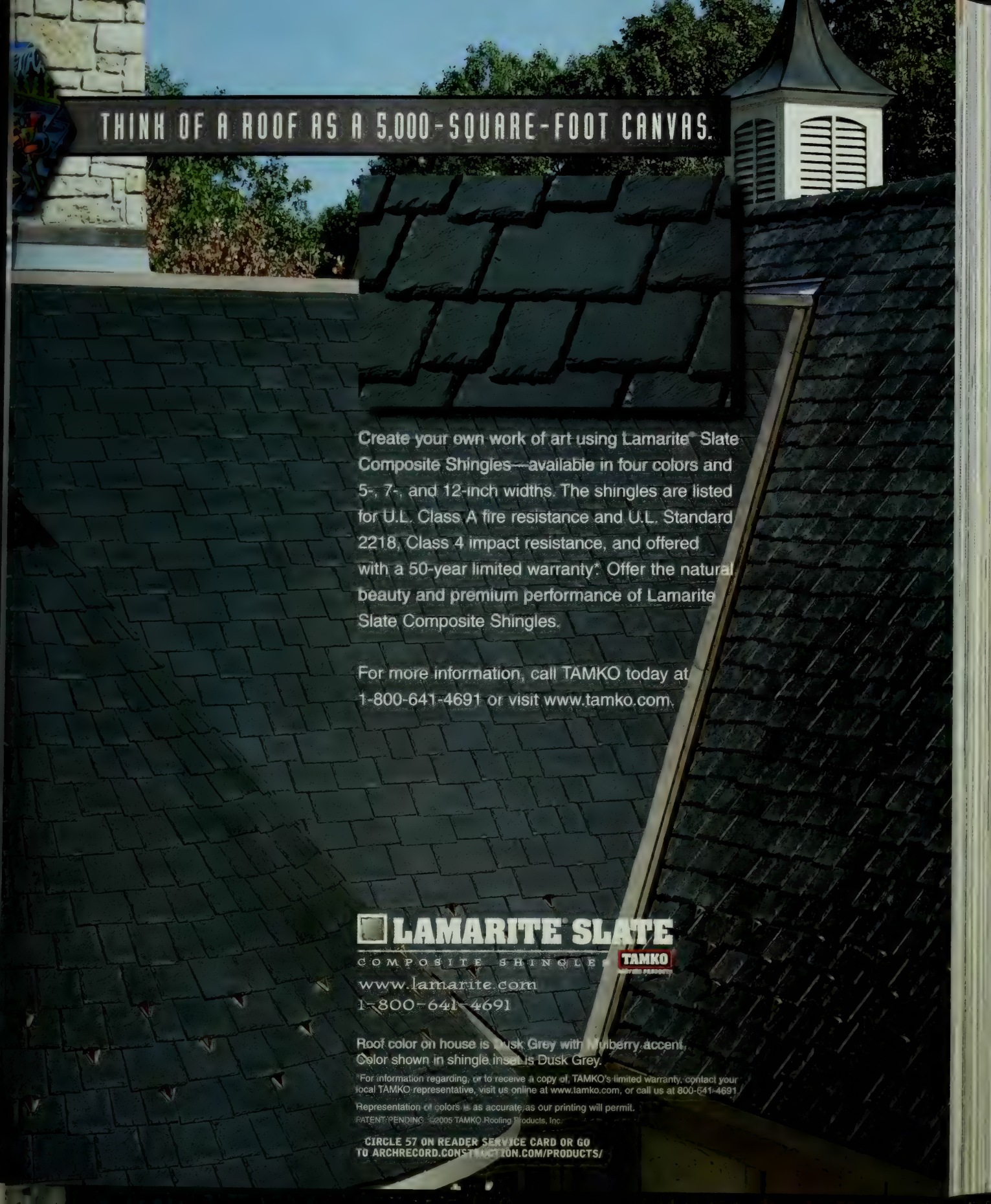
POSILOCK ®
Suspension
Displays

Streamline ™
Design
Accessories

FacadeScape™
Stainless Trellis
Systems

Web: www.decorcable.com E-mail: sales@decorcable.com Phone: 1.800.444.6271

CIRCLE 56 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Create your own work of art using Lamarite® Slate Composite Shingles—available in four colors and 5-, 7-, and 12-inch widths. The shingles are listed for U.L. Class A fire resistance and U.L. Standard 2218, Class 4 impact resistance, and offered with a 50-year limited warranty*. Offer the natural beauty and premium performance of Lamarite Slate Composite Shingles.

For more information, call TAMKO today at 1-800-641-4691 or visit www.tamko.com.

LAMARITE® SLATE
COMPOSITE SHINGLES
TAMKO
www.lamarite.com
1-800-641-4691

Roof color on house is Dusk Grey with Mulberry accent. Color shown in shingle inset is Dusk Grey.

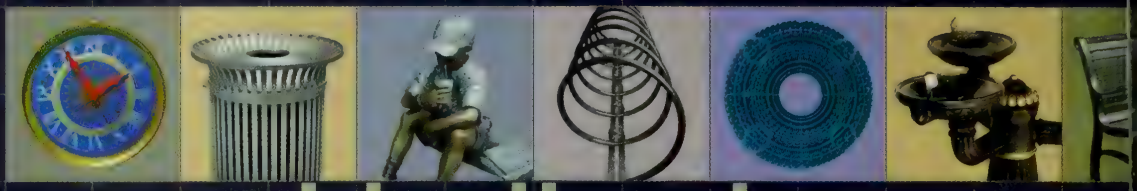
*For information regarding, or to receive a copy of, TAMKO's limited warranty, contact your local TAMKO representative, visit us online at www.tamko.com, or call us at 800-641-4691.

Representation of colors is as accurate as our printing will permit.

PATENT PENDING ©2005 TAMKO Roofing Products, Inc.

CIRCLE 57 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Bollards have become an increasingly popular design solution for safe spaces in the urban landscape. Canterbury offers a choice of designs from unique contemporary to traditional that complements the surroundings, when reinforced barriers are required. Canterbury can assist with design concepts, so unleash your creativity and Canterbury will manufacturer your creation.



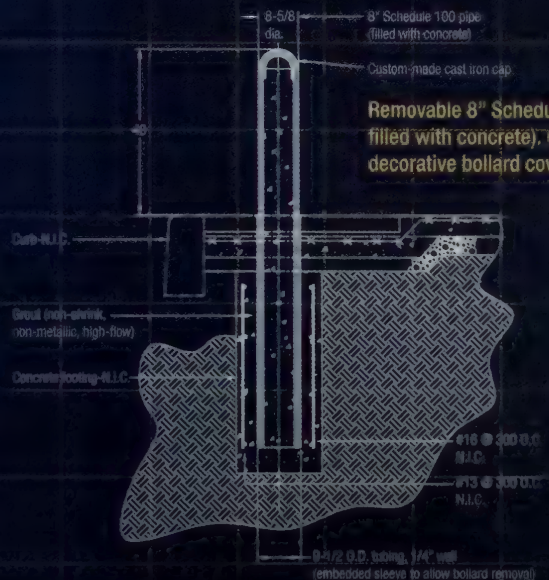
reinforced bollards from canterbury



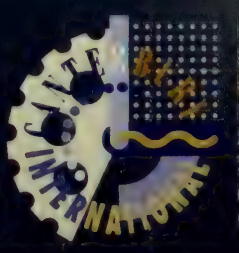
1890 REINFORCED BOLLARD. Traditionally designed bollard, cast in iron, aluminum or bronze, for permanent or removable installation. Bollard Size: 18" diameter x 43" high. Pipe Size: 8" Schedule 100 pipe (to be filled with concrete). **OPTION:** 10-3/4" steel pipe (larger bollard).

CHICAGO-2 REINFORCED BOLLARD. Cast in Iron, Aluminum or Bronze for permanent or removable installation. Removable bollard pipe may be set in a steel sleeve provided by Canterbury for ease of removal. Bollard Size: 12-3/8" diameter x 42-1/2" high. Pipe Size: 8" Schedule 100 pipe (to be filled with concrete). **OPTION:** 10-3/4" steel pipe (larger bollard).

ALLIANCE FOR DOWNTOWN NEW YORK REINFORCED BOLLARD. Contemporary designed bollard, cast in iron, aluminum or bronze, with stainless steel cap, for permanent or removable installation. Bollard Size: 12" diameter x 46" high. Pipe Size: 8" Schedule 100 pipe (to be filled with concrete). **OPTION:** 10-3/4" steel pipe (larger bollard).



Removable 8" Schedule 100 pipe (to be filled with concrete). Can be used with decorative bollard covers.



If you can imagine it, we can build it!
Call us with your most challenging proje
CANTERBURY INTERNATIONAL
800.935.7111
323.936.7111
323.936.7115 fax
canterburyinc@earthlink.net
www.canterburyintl.com

CIRCLE 58 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Pick a color. Any color.

Take The Pain Out Of Painting With Timely® Prefinished Steel Door Frames.

Count on perfect color coordination and be as selective as you wish with Timely. All colors are applied in coil form with durable baked-on polyester coatings and applied under controlled conditions, eliminating the possibility of environmental pollution. Timely frames also assure efficient installation as well. Because they're prefinished, they can be installed after the walls are finished. This elliminates costly delays or wall damage, messy paint spills on floors or carpets and time consuming touch-ups.

You can also bank on Timely's built-in economy. Because these frames are prefinished, you can save $25 to $50 per opening, while guaranteeing quality and color uniformity.



6 Stocking Designer Colors.

29 Custom Colors Plus Prime.

Or Pick A Color. Any Color. We'll Match It.

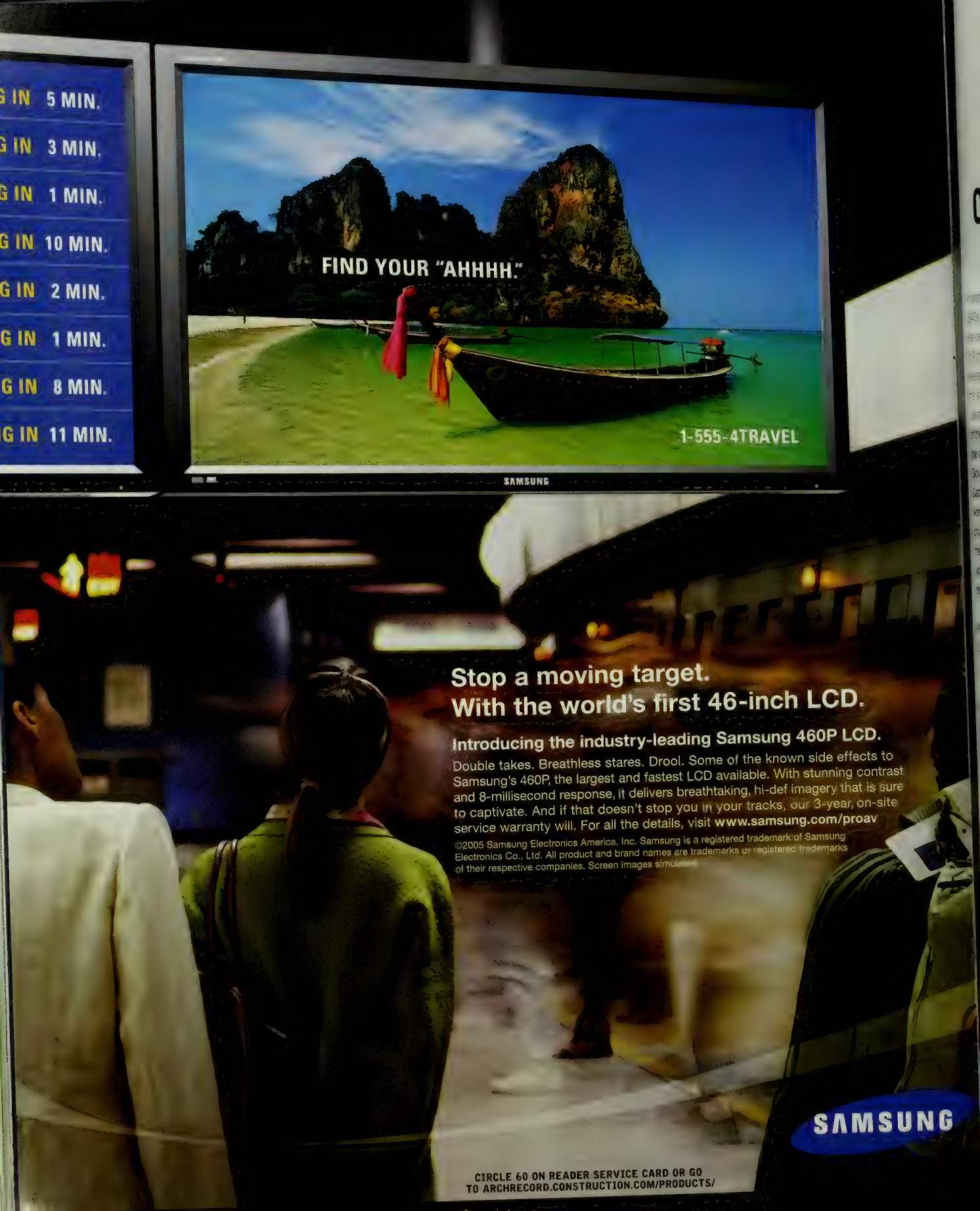
TIMELY®
PREFINISHED STEEL DOOR FRAMES
A DIVISION OF S.D.S. INDUSTRIES, INC.

SEE US AT AIA CONVENTION BOOTH #1832

Meeting Your Demand for Quality: Over 30 trendsetting years in the field. **Versatility:** 5 casing design options. **Strength:** Sturdy full perimeter anchoring. **Beauty:** MiterGard® for perfect corners. **Fire Rating:** Full 90 minute positive pressure. For more details, visit us at **www.timelyframes.com** or call our **Marketing Services Department. 800-247-6242**

© Timely 2005

CIRCLE 59 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/


G IN 5 MIN.
G IN 3 MIN.
G IN 1 MIN.
G IN 10 MIN.
G IN 2 MIN.
G IN 1 MIN.
G IN 8 MIN.
G IN 11 MIN.
FIND YOUR "AHHHH."
1-555-4TRAVEL
SAMSUNG
Stop a moving target.
With the world's first 46-inch LCD.
Introducing the industry-leading Samsung 460P LCD.
Double takes. Breathless stares. Drool. Some of the known side effects to Samsung's 460P, the largest and fastest LCD available. With stunning contrast and 8-millisecond response, it delivers breathtaking, hi-def imagery that is sure to captivate. And if that doesn't stop you in your tracks, our 3-year, on-site service warranty will. For all the details, visit www.samsung.com/proav
©2005 Samsung Electronics America, Inc. Samsung is a registered trademark of Samsung Electronics Co., Ltd. All product and brand names are trademarks or registered trademarks of their respective companies. Screen images simulated.
SAMSUNG
CIRCLE 60 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Rome is booming, but for stars and newcomers, the city remains a challenging place to build

Correspondent's File

By Paul Bennett

An architecture critic writing in the 1640s could have easily named Francesco Borromini the top architect of Rome—and, by extension, the Western world. Borromini walked onto the scene with a revolution at San Carlino, and followed this with some of the most important commissions in the city, including the redesign of San Giovanni, the mother church of the Catholic faith. He was also hard at work on the eye-popping Sant'Ivo church, today still considered one of the most important buildings in the world. Yet this early critic might have regretted his pick a decade later,

Paul Bennett, a Rome-based writer, is a former editor of Landscape Architecture *magazine.*

when Borromini was eclipsed by his rival and nemesis Bernini, and he found securing commissions in the eternal city a difficult task. By late summer 1667, our critic would have been depressed to read that his prodigy had fallen on a sword, committing a slow and agonizing suicide.

That Rome defeated an architect like Borromini touches on serious matters today as Rome becomes a place for significant new architecture, with top architects such as Zaha Hadid, Rem Koolhaas, and Richard Meier, FAIA, all hard at work on what they hope will be signature buildings that can stand beside the likes of Michelangelo, Appollodorus, and Libera. If Rome defeated Borromini, what will it do to these star architects, much less the city's emerging talent?

"Rome can be a dangerous place," says Livio Sacchi, an architecture critic and professor of architecture at the University of Pescara, in describing the weighty historic context. "You have to be able to digest the city's architectural importance, and then move on. Too many architects have gotten stuck here unable to do good work."

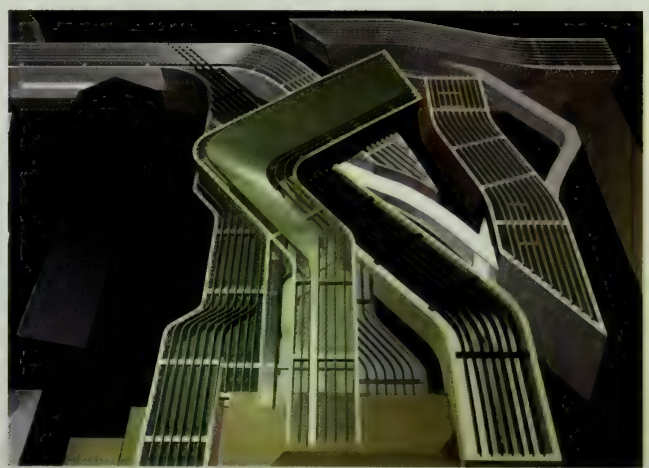
Starchitects arrive

After several sleepy decades, from the 1950s to the 1980s, punctuated by the Tangentopoli scandal of the early 1990s, in which a shocking system of graft and backhanding was exposed throughout Italy, the architecture scene in Rome began to wake up. The city's rebirth dates to a major civic commission to build a new music center, the City of Music [RECORD, October 2003, page 116], which was won by Renzo Piano. This was quickly followed by two more international commissions: one for a Vatican-sponsored Jubilee Church (or "church of the millennium"), and the other for a new pavilion for the Ara Pacis (altar of peace) monument, built in 13 B.C. to commemorate Augustus Caesar's victories over Spain and Gaul. Both of these attracted a who's who of international architects, and while both were won by Meier, it was obvious by the 1990s that Rome was becoming a place where serious architects could find work. Currently, Zaha Hadid is





Richard Meier's Ara Pacis project (left two), with the architect's typical Modern styling and materials, has been slowed by politics. Zaha Hadid's Center for Contemporary Art (below) is under construction.



designing a major renovation and addition to the National Center for Contemporary Art just north of Rome's center. Her typically ambitious design of interweaving corridors is already under way. The other big museum commission in town is for the Museum of Contemporary Art, or MACRO, won by Paris's Odile Decq, who will completely remodel an old Peroni beer company brewery. Rem Koolhaas has just won a commission to construct a major retail development, called Mercati Generali, on the site of the former city marketplace on the edge of town.

"All of these international architects coming to Rome, winning competitions … it's great," says Massimiliano Fuksas, Rome's homegrown star architect who, after several years' exile in Paris, returned to the city in the wake of Tangentopoli. "But what is most exciting is that these things are getting built." What many (including Fuksas himself) believe will be the crowning achievement of his career, a convention hall in the EUR suburb of Rome, designed like a cloud, is in the last phase of development.

The challenges of history

While paying attention to the traditions of the 1970s is important in most places, in Rome one also has to think about the 1870s, the 1770s, the 770s, and the 70s, as well. Nowhere else does an architect need to grapple with so many different eras and traditions, and so history itself becomes a key challenge. "The most important aspect of building in Rome is the layers of history," says Meier. His Jubilee Church makes references to Borromini and the traditions of Baroque church building, but since it sits in the suburbs, Meier admits it escapes the historical trap. But the Ara Pacis is located in the center of the city, a few feet from the 1st century Mausoleum of Augustus on the east bank of the Tiber. Meier describes his Modernist, white travertine-and-glass pavilion as a bridge between eras.

Meier spent the better part of the design process for the Ara Pacis project fighting the flamboyant arch-conservative Vittorio Sgarbi, who was serving as minister of culture. Construction was halted for more than a year, and to all appearances, it looked like it wouldn't start again.

Second City: Milan leads the Italian construction boom. But will it last?

After a bad year in 2003, the Italian construction industry bounced back onto a boom track that began in 2000. The construction index, which weighs starts against other data, has increased by 20 percent in the past four years, and in 2004 rose more than 6 percent.

Most of the building boom is taking place in Milan. The main news this spring is the completion of a new facility for the Milan Trade Fair, which was relocated from its fairgrounds in the city center to a western suburb and took the opportunity to greatly increase its size.

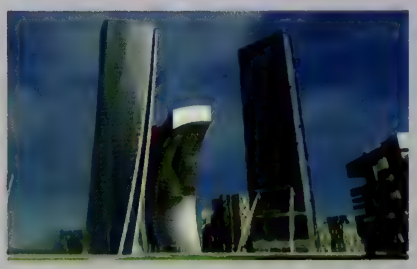
"For a time, the Fiera was the biggest construction site in the world," says project architect Massimiliano Fuksas. "The main hall is a mile long. There's 600,000 square feet of glass in the structure."

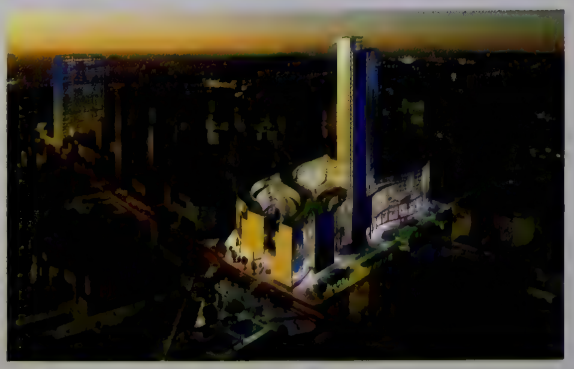
The Milan scene heated up for a while in the 1970s and 1980s before scandal brought collapse in the 1990s to the entire Italian construction industry. But after a half decade of economic recovery, Milan has seen its key industries—media, fashion, and the design trade fairs—rebound with strength. The Fiera fairs themselves have grown by 30 percent (according to revenue) over the past five years, and with the expansion, the Fiera will become the second-largest exhibition center in the world.

Unlike Rome, where most new commissions are cultural or public buildings, most of the new construction in Milan is private and commercial. The most recent headline-grabbing commission was announced last fall for a three-tower office complex designed by Daniel Libeskind, Zaha Hadid, and Arata Isozaki. Also on tap is a 525-foot skyscraper by Pei Cobb Freed—topping out Gio Ponte's Pirelli Building to become the tallest in Italy—and a "city of fashion" zone planned by Cesar Pelli.

The boom in construction is outstripping the Italian economy, which has only been growing by 2 percent. But market analysts at Market & Business Development warn that this is due in part to the rebound effect of the end of the building recession in the 1990s. At the same time, many worry that the high value of the euro and the inflation rate in Italy, which one national statistics agency put at nearly 10 percent at the end of 2004, spell only short-term success. Already the bubble may be bursting. After a much-discussed competition for the high-profile European Library of Information (BEIC) won by Bolles+Wilson of Munich in 2001, the library has been unable to raise capital to begin planned construction in 2005. ***P.B.***







Fuksas's Milan Trade Fair facility under construction (above). A coming skyscraper complex by Zaha Hadid, Daniel Libeskind, and Arata Isozaki (left). Pei Cobb Fried's new skyscraper (below).

Introducing the Era® Collection



KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

www.kimlighting.com

Made in America

HUBBELL® Hubbell Lighting, Inc.



CIRCLE 61 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

But while Sgarbi huffed and puffed about what he deemed a cultural abomination on his television talk show (yes, the culture minister of Italy was also a talk-show host), Meier withstood the maelstrom quietly. "You just have to hold on tight," says Meier partner Nigel Ryan, "and, on one level, not pay attention."

Piano's City of Music took nearly 10 years to construct. Meier's church over six. The Ara Pacis pavilion is entering its fifth. But the steel frame of the roof is up, and work is progressing quickly.

"Finally, after so many years, I have an answer for when people ask me when it will be done," says Meier. "It's a very Roman answer: Soon."

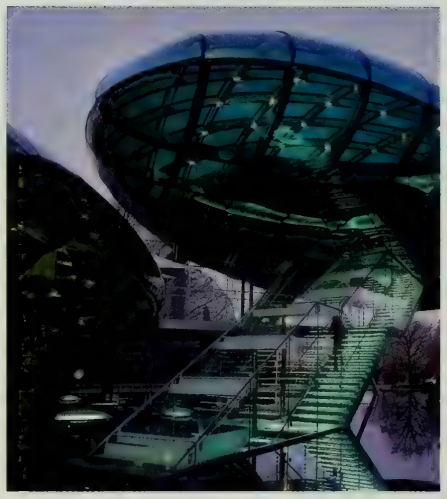
By necessity, history largely defined Piano's auditorium, which makes strong references to the Pantheon with its lead roof and to Imperial Roman building with its use of brick and travertine and wooden trusses.

A harder road for emerging architects

Regardless of the grip of history and politics, all of these big, headline-grabbing projects may not be the best measure of Rome's mettle. "Rome now has, like so many other cities, so-called 'big name' architecture," says Pio Baldi, director general for contemporary art and architecture in the Italian ministry of culture. "But what Rome really needs is a lot more little buildings by little-known,

FINALLY, AFTER SO MANY YEARS, I HAVE AN ANSWER FOR WHEN PEOPLE ASK ME WHEN IT WILL BE DONE: SOON.

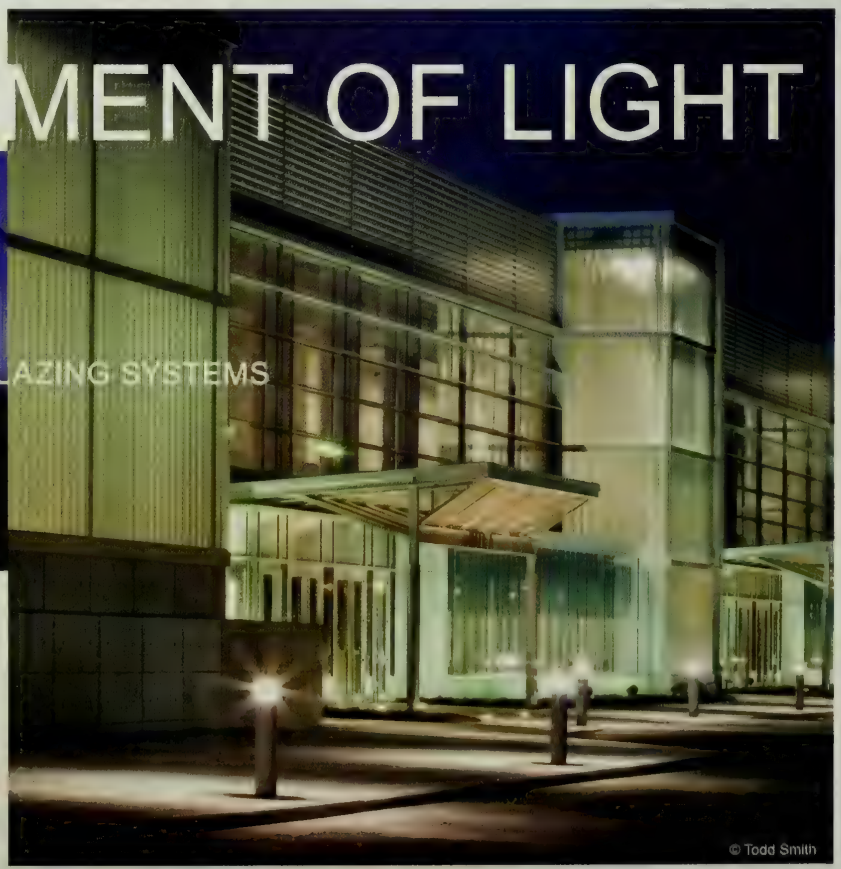




Renzo Piano's City of Music (above) helped spur Rome's Modern rebirth. Roman architect Massimilano Fuksas's Ditta Nardini distillery and research center in Vicenza is similar in form to the architect's future convention hall in EUR, a suburb of Rome.

Pilkington Profilit™
MANAGEMENT OF LIGHT





Efficiently manage light, visibility and energy by incorporating **Pilkington Profilit™** in your building design. Profilit products can meet your design requirements through a combination of alternative surface finishes, performance coatings and specialized installation materials.

Established 1873
WESTCROWNS INC.
910-579-4441
www.westcrowns.com
dtodd@westcrowns.com

CIRCLE 62 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Passion for Perfection

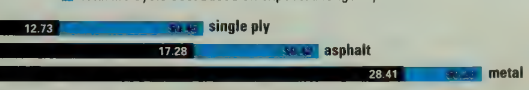
Passion drives craftsmen to achieve outstanding results.
From fabric, pigments, and marble to jade, bricks, and wood.

Our passion is metal. With our craftsmanship, we not only make the world's best standing seam metal roofing systems, we also teach professionals the right way to install them. We go to the job site and personally inspect the work in progress so we can assure long lasting, beautiful performance, and guarantee it with our Single Source Warranty.

"I choose a block of marble and chop off everything I don't need."
– François-Auguste Rodin

Low Slope Roofing Life Cycle Cost Comparison*

■ expected total service life (in years)
■ total life cycle cost based on expected longevity



www.mbci.com/lifecycle *Ducker Research, 36 case studies, May 2004

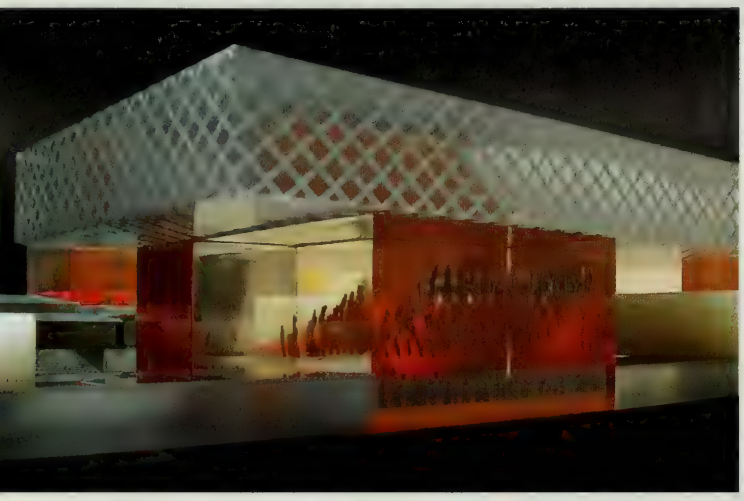
ENERGY STAR PARTNER

MBCI

www.mbci.com
16 MBCI locations to serve you

Houston, TX (877) 713-6224 • Adel, GA (888) 446-6224 • Atlanta, GA (877) 512-6224 • Atwater, CA (800) 829-9324
Dallas, TX (800) 653-6224 • Indianapolis, IN (800) 735-6224 • Lubbock, TX (800) 758-6224
Memphis, TN (800) 206-6224 • Oklahoma City, OK (800) 597-6224 • Omaha, NE (800) 458-6224
Phoenix, AZ (888) 533-6224 • Richmond, VA (800) 729-6224 • Rome, NY (800) 559-6224
Salt Lake City, UT (800) 874-2404 • San Antonio, TX (800) 598-6224 • Tampa, FL (800) 359-6224

CIRCLE 63 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



OMA's new Mercati Generali will include transparent and glowing skins.

but excellent architects." Baldi says that his ministry will be spending a lot more time fostering these kinds of commissions. One reason, he says, is that Rome has a glut of architects. Unemployed designers complain that too many of their number are leading tours, teaching high school, or writing articles about architecture instead of actually building. The one dissenting voice is the ever-jovial Fuksas, who argues that since architects are artists, there can never truly be a glut. "Would a painter complain that there were too many painters and that there should only be 30? No. He'd say it didn't matter, because he was the best." The positions that architecture school graduates do get in studios pay famously low or not at all.

"WOULD A PAINTER COMPLAIN THAT THERE WERE TOO MANY PAINTERS AND THAT THERE SHOULD ONLY BE 30?"

Many argue that federal and municipal governments should be doing more to help and protect small, local firms rather than doling out big commissions to the Rem Koolhaases of the world. Instead of waiting for this to happen, a small organization of young architects calling themselves the "Rome Eight" has banded together to sponsor lectures, write articles, and generally raise a ruckus about what they see as Rome's ultra-conservative and hard-to-penetrate architectural aristocracy. The group includes Labics [profiled in RECORD's Design Vanguard 2003, page 76], Nemesi, N!, T-Studio, Delogu Architetti, Luigi Centola, King & Roselli, and Giammetta & Giammetta. Heavily influenced by northern European trends, the group has taken a strong position against the old guard of Roman architecture—the deans of the architecture schools, who exert a powerful dominance over architecture in this city.

"Italy has been frozen by people like Paolo Portoghesi, Vittorio Gregotti, and Gae Aulenti," says a prominent figure in the Rome architecture scene, referring to some of the great names of the 1970s and 1980s, who all occupy major posts in the schools. "And so the young, frustrated by this, react by turning their backs on it all. This is good, because it shakes things up. But also they risk turning their back on history." ■

Versatile
Colorful

Imagine with metal wall panels!

Contact the Metal Construction Association at 847/375-4718 or visit www.metalconstruction.org for more information.

MCA Metal Construction Association

American Iron and Steel Institute

Participating Wall Panel Manufacturers and MCA members

ATAS International, Inc. • Alcoa Cladding Systems • CENTRIA Copper Sales • Foam Enterprises • Metecno-Aluma Shield Metl-Span, Ltd. • Umicore Building Products



Design Awards Winner: International Village, Vancouver, BC • Kir Ker Architects

CIRCLE 64 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The forecast calls for Tyvek®.

Nothing threatens the structural integrity of a building like unwanted water and moisture. That's why intelligent moisture management is so critical to sound design and construction. And why more architects now protect their projects with DuPont™ Tyvek® CommercialWrap®.

Tyvek® CommercialWrap® was engineered specifically to help protect exterior wall systems in today's higher-value light commercial construction. It's up to 300% better at bulk water holdout than conventional building papers. And because Tyvek® breathes, it helps allow moisture vapor molecules to escape the wall cavity. So walls stay dryer.

You can't do anything about the weather. But you can prepare for it, with Tyvek®. Find out more at 1-800-44-TYVEK® or www.TYVEK.com.

Tougher, stronger, higher-performance

DuPont™ Tyvek® COMMERCIALWRAP®

DUPONT

The miracles of science™

© Copyright 2003-2005 E.I. du Pont de Nemours and Company. Tyvek® is a registered trademark of DuPont for its brand of protective material. All rights reserved.

CIRCLE 65 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Celebrating Forty Years



Entertain All Your Senses with the uncompromising quality and style of a Dacor kitchen. For generations we've been building innovative high-performance appliances, each hand-crafted down to every delicious detail. Turn family gatherings and everyday entertaining into events to remember.

dacor
The life of the kitchen™

RANGES • WALL OVENS • COOKTOPS • VENTILATION • MICROWAVES • REFRIGERATION • OUTDOOR GRILLS

800.793.0093 www.dacor.com/AR

CIRCLE 66 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Mexico City, chaotic and creative, launches a new generation of talented architects

Exhibitions

By Sam Lubell

Mexico City Dialogues: New Architectural Practices.
Curated by José Castillo. At the Center for Architecture, New York, through May 7, 2005.

This spring, New York City's Center for Architecture assembled its first international exhibition, *Mexico City Dialogues: New Architectural Practices*, presenting 14 projects by young firms from one of the world's most complex and expansive cities. Wisely, the center chose a Mexico City native to curate the exhibition, José Castillo, a professor at the Universidad Iberoamericana, and currently a principal at Mexico City–based Arquitectura 911sc. Castillo has put together a show that, like its subject, is at times confusing, and perhaps too ambitious, but nevertheless fascinating. Linking the political, legal, and social trends of the city with the design and development strategies of these projects, the show provides a rare glimpse of a developing world of architecture that is often ignored by the architectural elite in the U.S. and Europe.

The show begins with a Mexico City Fact Room, displaying introductory statements by local intellectuals, as well as background information on the city presented in aerial maps, time lines, and detailed statistics. The room offers a first glimpse into the chaotic world of building in Mexico City, a sprawling and quickly growing metropolis of 18.5 million, where the majority of development happens outside of any planning framework. The presentation is sprawling, as well: A time line, for instance, contains not only important dates, but pictures of significant architectural projects, rapidly climbing population figures (2.9 million in 1950, 16.9 million in 1990), developing income levels, and so on.

Like this blitz of often-overlapping data and imagery, the immense scope of the city appears in many ways overwhelming, even horrifying. But the exhibition helps find a silver lining. As Miguel Adria, architect and editor of the magazine *Arquine* in Mexico City, says in one wall panel, "It is in the cracks, in the fissures of imperfect structure where opportunities exist." TEN Arquitectos principal Enrique Norten, who served as a sort of godfather to the young architects at the exhibition's opening, describes the context within which these designers are working: a remarkably complex city undergoing rapid change. "The overlaps that result from this phenomenon make it distinct from other great metropolises," he notes.

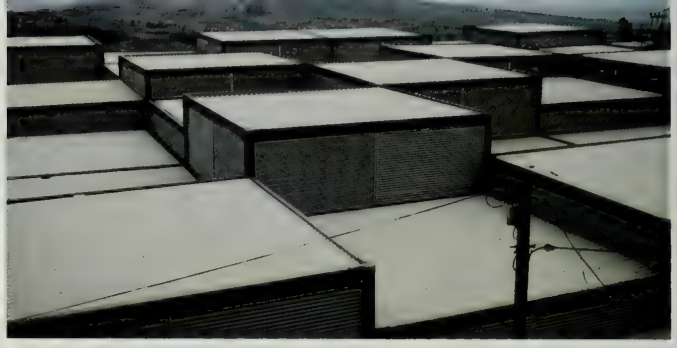
Mexico City's character forces the creativity—not just in form but in program—that is evident in many of the chosen projects, designed by some of the city's most promising young architects. In the exhibition's main space, on the center's lowest floor, Castillo manages to include not only photographs, drawings, models, and architectural commentary, but also descriptions of the legal and economic hoops these enterprising architects managed to jump through to make these buildings possible. Project notes also describe the neighborhoods in which the projects are built—a wide range, including poor communities on the outskirts of the city and posh, affluent zones.





Dellekamp Arquitectos's AR 58 apartment building (above). Volvox's Lope de Vega 324 apartment (right).

Even in richer and more established neighborhoods, architects must contrive creative solutions. Dellekamp Arquitectos's AR 58 apartment building, located in Condesa, a rejuvenated area with stylish bars and restaurants, offers an intriguing solution for dense residential design. Matching the area's liveliness, the architects have built a series of stacked housing units separated by voids "floating on air," as the exhibition text states. The mix of



Mauricio Rocha's Oztotepec Market replaces an old market's tents.

corrugated aluminum (a popular material in these projects, perhaps because it is cheap and offers rich texture), sheet aluminum, and concrete give each unit a distinct identity. Apartment balconies provide visual connections with the street. In the Lope de Vega 324 apartment building, the architectural firm Volvox uses a contemporary aesthetic in a traditional neighborhood by turning strict local code requirements for open space to its favor, creating a vertical inner garden that helps foster density and creates a unique mixture of interior spaces. At the FALCON Corporate Office, Rojkind Arquitectos transformed an existing house in a quiet residential area into a visual marker for the company (other local companies tend to tuck their offices behind discreet fronts). The architects used colorful panels to create a pixelated screen around the building and provide space for a cactus garden between the offices and the screen.

In low-income areas, architects have fewer resources to work with, so they need to be more creative and less reliant on standard design solutions. FRENTE Arquitectura, for example, built a group of low-income houses quickly and cheaply using variations of color and form to break the typical "row after row" monotony of public housing. Subtle changes in light pastel colors lend energy and richness to a type of project that too often reads as a sea of white or gray apartment blocks. Another example of innovation applied to social housing is the San Pablo Oztotepec Market, in one of the city's poorest areas, where Taller de Arquitectura/Mauricio Rocha replaced the tents of the area's old market with elevated units separated by corrugated-metal-louvered shades.

The exhibition places project notes and images in horizontal bands around the gallery's back walls, an arrangement that highlights the connections between the projects (and saves space in this often-crowded New York architecture hub). But this setup sometimes makes it difficult to focus on individual works. For taller viewers, getting to see the firms at the bottom of the three bands was often an exercise in back strain. But it was usually worth the effort. As the exhibition makes clear, many talented architects are working south of our border. Distanced from the herd mentality of large firms and energized by a hyperpopulated urban environment, this emerging generation of designers is developing its own set of aesthetics, strategies, and ideas. Indeed, as architectural talent and knowledge expand and the globalized world continues to shrink, the focus of the professional discourse will inevitably shift. Certainly, more exhibitions will focus on emerging architecture from once-ignored corners of the world. The prospect might be daunting, considering the difficulty of keeping track of what's happening just in local circles. But this new reality offers opportunities both overwhelming and exciting. ■

BSD speclink

MasterFormat™ 2004?

NO PROBLEM!

BSD SpecLink® is the ONLY spec product that makes the switch for you – with one mouse click! CSI/CSC's new MasterFormat is now available, and the North American construction industry is rapidly adopting the new standard. Instead of the familiar 16 divisions, there are now 50, and the old 5-digit section numbers have become 6- and 8-digit numbers.

How will YOU handle the transition? Master specifications based on word processing will have to make the change manually. BSD SpecLink is based on relational database technology that lets you flip any project back and forth between the old and new formats – automatically! One mouse click changes all section numbers and titles in your project – as well as all internal cross references.

Let us show you how our proven specifications solution will improve your productivity while eliminating the MasterFormat transition problem. BSD SpecLink even lets you import and convert your own favorite sections from word processing files.

You won't find a better specifications solution anywhere else!

BSD Building Systems Design, Inc.

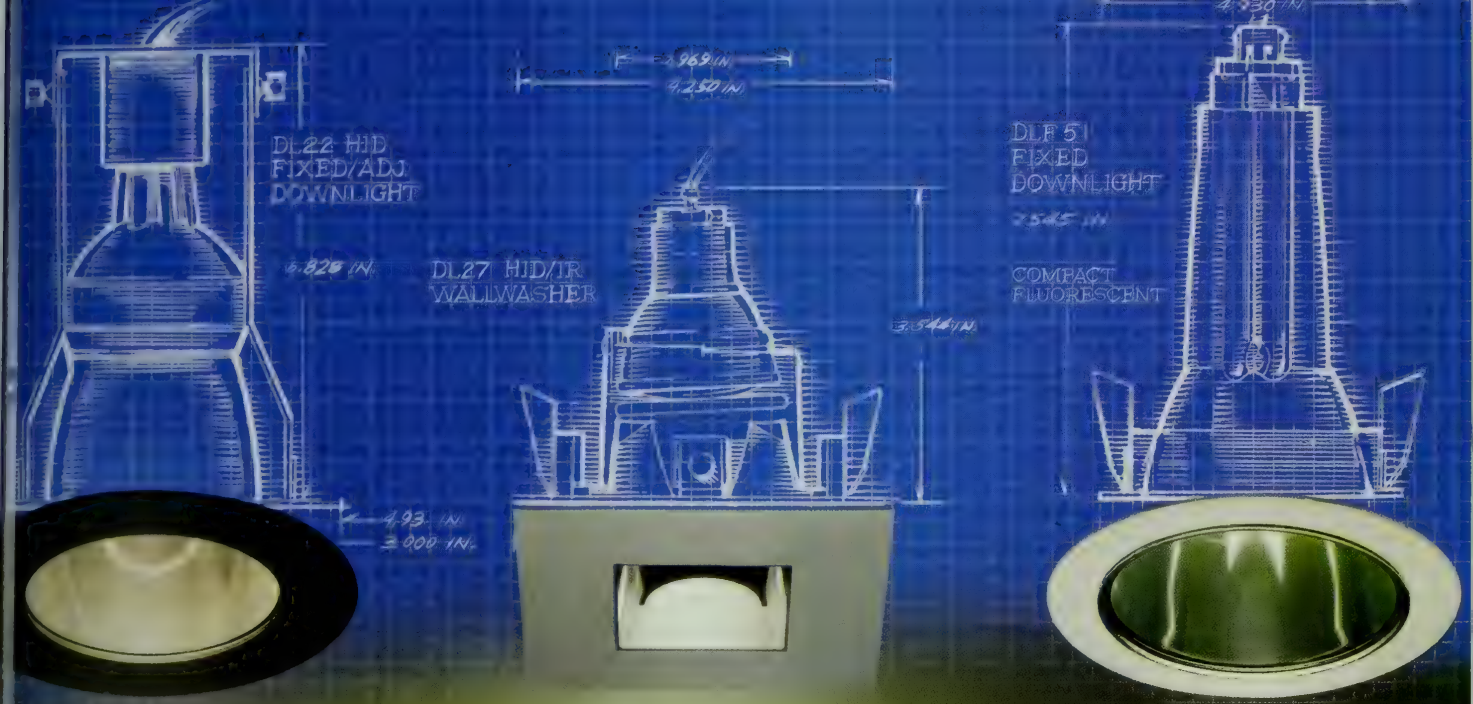
Exclusive offering of CSI-DBIA and BSD.

Call us today to set an appointment for a live, on-line demo, or download a free demo from our website.

1-888-BSD-SOFT
1-888-273-7638

Or visit our website at www.bsdsoftlink.com

CIRCLE 67 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



idden beauty: not just another pretty fixture.

The artistry behind Lucifer's new downlights has created function that is as beautiful as the form. Accepting HID, CFL, and IR lamps, these low profile fixtures make energy efficiency a creative opportunity with louvers, lenses, and baffles that allow light to be tuned for a variety of effects. Lucifer downlights: beautifully designed, elegantly engineered, and exceptionally efficient.

LUCIFER
LIGHTING COMPANY

800.879.9797
luciferlighting.com

Tuneable Lighting

UCIFER
GHTING
25th
NIVERSARY

CIRCLE 68 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



MAKE THE WORLD GO AWAY. OR NOT.

Privacy versus light on an inside office can be a major debate. Now, with our new Variable Privacy™ Door, you can offer the best of both worlds. With blinds built right into the glass, simply slide the lever and have instant privacy, or added light with a view. Part of our Marshfield Signature Series.™ Marshfield DoorSystems, **Opening Doors to Unlimited Possibilities** for over 96 years. 1-800-869-3667 ext. 2322. marshfielddoors.com

Marshfield DoorSystems

CIRCLE 69 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

For and about the emerging architect

archrecord2

This month in archrecord2, we take a closer look at the five architects selected for the the 2005 American Institute of Architects' Young Architects Award, to be presented at the upcoming AIA National Convention. Scattered throughout the U.S., these architects have made significant contributions to the profession and have undertaken leadership roles within their communities. For more projects completed by this year's award winners, go to the archrecord2 Web site.

Design

Young Architects at Their Best

As is customary, during this year's American Institute of Architects National Convention and Design Exposition in Las Vegas later this month, five architects will receive the 2005 AIA Young Architects Award. All at early stages in their careers, each of the recipients demonstrate exceptional characteristics in their professional work that herald a promising future. These architects' contributions range from creating award-winning and sustainable design to mentoring and teaching to leadership in their communities.

As a principal of the Washington, D.C.–based Inscape Studio, Rick Harlan Schneider, AIA, is widely recognized for his sustainable design practices. Schneider, in fact, received the AIA/D.C.'s Presidential Citation for Sustainable Design in 2002 and 2003. His work includes master planning for the greening of communities, and residences he's either designed or renovated to be more environmentally responsible. The architect is instrumental in bringing this sustainability to the community, for both architects and the general public, through educational programs with the National Building Museum and the Catholic University of America, as well as his role as chairman of the AIA/D.C. Committee on the Environment.

There are several areas in which Eric Strain, AIA, has sought to bring attention to the architecture of Las Vegas. Strain's own firm, assemblageStudio, has earned 18 awards for design excellence in both public- and private-sector projects. This architect, who grew up in the Las Vegas area, also plays an active role in the leadership of the local AIA chapter, where he has served as president and was instrumental in creating *Architecture Las Vegas*, a publication devoted to showcasing the local architecture. Strain's involvement is not limited to native architecture, but includes art and design in the community: He has served as director of the Nevada Institute for Contemporary Art and coordinates arts and design symposia.

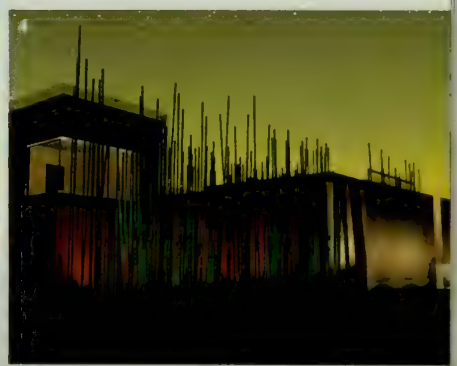
Miguel Rivera, AIA, is recognized not only for his award-winning projects at Mitchell/Giurgola Architects, but also for his efforts at Miró Rivera Architects in Austin, Texas, where he is a principal of the firm. His projects, both public and private, have been acclaimed by local and national award programs as well as



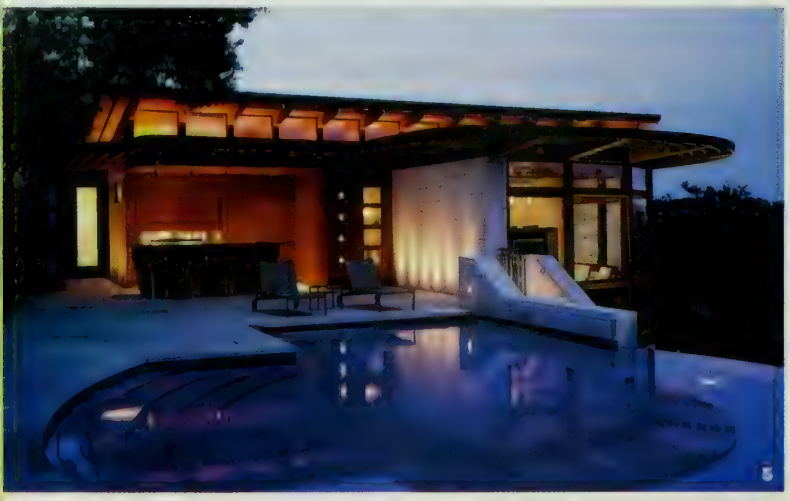


Inscape Studio
Examples of Rick Harlan Schneider's award-winning and environmentally responsible designs: (1) Butterfly Porch, Bethesda, Md.; (2) U Street Studios, Washington, D.C.





assemblageStudio
Eric Strain's designs deviate from the status quo of local architecture: (3) Mesquite Heritage Museum and Art Center, Mesquite, Nev.; (4) bamboo residence, Las Vegas, Nev.





Miró Rivera Architects
Miguel Rivera's design sensibilities, in his residential, commercial, and institutional projects, have an impact on the Austin, Tex., landscape: (5) Pool House, Austin, Tex.; (6) Rockcliff Guest House, Austin, Tex.

international publications. Originally from Puerto Rico, the architect also donates his time to various AIA Awards programs: He has served on juries in several states and filled the role of chair of the AIA New York City Design Awards Committee. He often serves as a studio review juror for architecture schools around the country.

Jeffrey DeGregorio, AIA, has used the early years of his career to create a role for himself in the Boston architectural community. At Payette Associates, he is currently a project architect and has worked on several large-scale renovations at higher-education institutions, including MIT, Tufts University School of Medicine, and Princeton University. DeGregorio developed the Young Designers Core, a program that promotes education and career growth within his firm. After the success of this program, DeGregorio initiated Payette Associates' first formalized mentorship program and also contributed to the formation of the Boston Society of Architect's Mentoring Program. Beyond his roles as designer and leader, DeGregorio teaches a design studio at the Boston Architectural Center and serves as a thesis adviser there.

As a project manager at Antinozzi Associates in Stratford, Connecticut, F. Michael Ayles, AIA, juggles a workload that includes design services for government agencies, educational facilities, and financial institutions. And while no longer an intern himself, Ayles has remained active in guiding emerging archi-



CIRCLE 70 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



You can't take your eyes off the beauty of Porcelanosa ceramic parquet. The exquisite design, the uncompromising European craftsmanship–only Porcelanosa makes such breathtakingly beautiful tile, kitchen and bath furnishings. To find the showroom nearest you, call 877-PORSAUS or visit **porcelanosa-usa.com.**

PORCELANOSA
TILE / KITCHEN / BATH

California / Florida / Maryland / New Jersey / New York
Porcelanosa / Venis / GamaDecor / L'Antic Colonial / System Pool / Butech / Noken / Ceranco

VISIT US AT | **the Tile of Spain Pavillion at AIA, Las Vegas, May 19-21, Booth #4046**

CIRCLE 71 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Antinozzi Associates
As a project manager, F. Michael Ayles juggles the daily responsibilities within the firm and also takes time to advocate the importance of mentorship. An example of Ayle's interior projects: (7) Webster Bank Darien, Conn.



Payette Associates
DeGregorio finds the time to take on the responsibilities of teaching and mentoring while also acting as a project architect on large-scale university work: (8) MIT: PDSI Project.

tects, specifically regarding internship and mentorship. He first worked on promoting the topic locally—for instance, he helped develop the Emerging Architectural Community, which serves associate and young architects, encouraging a focus on community service and providing opportunities for fellowship and networking. He soon moved into a national role with the AIA Intern/Associate Committee and the Young Architects Forum (YAF). As the 2004 chair of YAF, he wrote for numerous publications and spoke at several programs on the topic of firm-based intern programs and the importance of mentoring. *Randi Greenberg*

Many more projects from these award-winning architects are available on the Web at *archrecord.construction.com/archrecord2/*





ABC contractors have been building on-time, on-budget, high-quality construction projects for more than 50 years. Now you can find those contractors across the country—quickly, easily and at no cost to you by visiting www.findcontractors.com.



ABC
Associated Builders and Contractors, Inc.

4250 N. Fairfax Dr., 9th Floor
Arlington, Virginia 22203
Tel: (703) 812-2000
Fax: (703) 812-8200
Website: www.abc.org

CIRCLE 72 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Water is Precious

Water is the most valuable resource in our world

Water Conservation is fast becoming a global challenge.

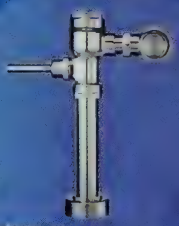
How do we accept the challenge?

Since 1906, Sloan has provided reliable, cost-effective solutions to delivering water. We believe you share our commitment to water conservation.

Sloan's **Water Conservation Division** and LEED®-applicable products can help you achieve your sustainability objectives.

Let Sloan's **Water Conservation Division** be your partner.

Water Conservation is not just our mission. It is our promise.



Water-saving manual and electronic Flushometers



Waterfree urinals



Water-saving electronic faucets



Water-saving pressure-assist water closets



Water-saving showerheads

SLOAN.

Call 800-9-VALVE-9 (800-982-5839) ext. 5609
www.sloanvalve.com

In China:
Sloan Valve Water Technologies (Suzhou) Co. Ltd. Suzhou New District, China
www.sloan.com.cn

VISIT US AT BOOTH 3049 AT THE AIA SHOW

CIRCLE 73 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Old-world style and contemporary performance together under one roof.

Now you can achieve style and performance in one amazingly beautiful roofscape. DaVinci Slate offers unique color blends and multiple shingle widths – creating a natural appearance never before achieved in a synthetic slate shingle. Even more beautiful, it out-performs all other options – as confirmed by its 50-year warranty Yet surprisingly, a DaVinci Slate weighs and costs substantially less than quarried slate. Clearly, this is the roof of the future.

DaVinci Roofscapes

A Renaissance in Roofing



www.davinciroofscapes.com

CIRCLE 74 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS

Looking at four star architects, along with the airports that make their international practices possible

Books



Architectural monographs have come to look like expensive office brochures, with testimonial essays as introductions. Aside from production quality and style, size and weight (no small matters), they differ mainly in the degree of their authors' endorsements: from simple description to unabashed hagiography.

Four new books on the work of Norman Foster, Richard Meier, Mario Botta, and Cesar Pelli are all very beautifully produced in full color. All use the time-tested format of introductory essays by well-known historians/critics, followed by a presentation of buildings and projects.

Beyond this, the books diverge dramatically in content, style, quality, and value for the reader (or those who simply view architectural images, a very important customer). The following reviews are in order of what I deem to be decreasing quality and value (which also happens to be decreasing price and weight). *Thomas Schumacher*

Norman Foster Works 4, edited *by David Jenkins. New York: Prestel, 2005, 563 pages (7.5 lbs), $99.*

Norman Foster Works 4 is the most ambitious and complete of these four monographs. It is exceptionally comprehensive, with thoughtful essays by well-known authors (at least in the U.K.), including Chris Abel, Francis Duffy, and Peter Buchanan, along with Foster himself. Here, a combination of well-written texts and a clear presentation of the work make the book's $100 price tag well worth it. Along with the essays, we are offered informative text about each project.

The first piece, by Abel, begins with an overall assessment of the Modern movement, its life, its "death" (the destruction of Pruitt-Igoe in 1972), and the Postmodern refutation of Modernism. Abel concludes that only a technological Modernism can tackle the architectural problems of today and tomorrow. For him, Foster's work becomes the natural and inevitable result of the forces of nature, technology, human relations, and economics. Abel presents a chronology of Foster's high-rise buildings, while overstating their importance in the history of world architecture. (I am reminded of Zhou Enlai's response to Henry Kissinger's question as to what the second-most-powerful man in Communist China thought of the French Revolution: "Too soon to tell.")

This does not detract from what is a monumental documentation of an architect's work. There are almost 100 pages devoted to Foster's rebuilding of the Reichstag in Berlin, with preliminary drawings and models, analytical diagrams, comparative studies, construction photos, and the finished product. This is one of the most complete representations of an architect's work I've seen, making it worth its weight. Buchanan's engaging essay on the Reichstag combines formal analysis and description, historical analysis and anecdote.

Duffy, an expert on office planning and design, gives a glowing account of Foster's innovations in that realm, plus an analysis of why the logic and use of symbol made Foster's solution to the World Trade Center competition the best entry. Duffy claims, "Unlike all the other entries, Foster's towers rose to the occasion—they were neither gestural nor arbitrary." Unfortunately, this statement is unsupported with argument; but then, Duffy is promoting Foster. His explanation of why American skyscrapers are different from those in the rest of the world is well worth reading.

Despite such brief excursions into unreasoned praise, the essays in this volume are both informative and convincing. Foster's buildings are presented for what they are: technologically advanced and aesthetically enticing.

This book should not be placed on your coffee table for two reasons: First, it might collapse the table, and second, it deserves to be on your desk to return to from time to time, to peruse the descriptions, the essays, and the images. *T.S.*

Richard Meier, Architect, Volume 4, *by Richard Meier. New York: Rizzoli, 2004, 432 pages (5.2 lbs), $80.*

This is the most beautiful book of the group. The antiseptic images have surfaces so clean they almost squeak off the pages. The photos are so perfect they look surreal. The sky is so blue, it can't be real—or is it? These images flawlessly display the essence of Meier's architecture. (Digital photography serves him well.)

Unlike other essayists, Meier's are not engaged in hagiography. Both Frampton and Rykwert give us straightforward descriptions. Frampton's text is mostly laudatory, but Rykwert makes a measured, almost wry attempt at criticism, often of Meier's clients.

The images and drawings are so amazing they make you wonder what is real and what is Memorex. Not only do the computer-generated pictures look good enough to be real, but the real photographs look good enough to be computer-generated. Some are combinations of both. This is unnerving and distracting, as if to make the point that all these images are interchangeable.

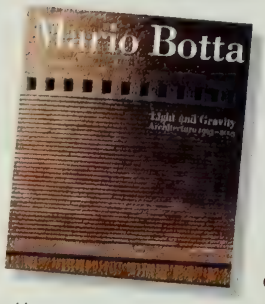
Meier's plans make it easy to "read" the spaces, and his elevations—with their black shadows—complement the style of the architecture. Italian historian Giorgio Ciucci has described this sort of imagery, particularly in photographs, as a kind

of architectural pornography; that is, a substitute for the real thing. Is one condemned to disappointment upon seeing the actual buildings?

For architects trying to understand the ideas behind an architect's buildings through images, this book is exemplary in its presentation. *T.S.*

Mario Botta: Light and Gravity: Architecture 1993–2003, *by Gabriele Cappellateo, Giuliano Gresleri, Lionello Puppi, and Heinrich Thelen. New York: Prestel, 2005, 267 pages (3 lbs), $65.*

The subtitle *Light and Gravity* is the perfect leitmotif for Botta's buildings. They are heavy masses for which light and shadow, both inside and out, are primary qualities. (I am reminded of Sir John Vanbrugh's epitaph: "Lay heavy upon him earth, for he laid many a heavy load on thee.") Botta's work is the most material of this group, perhaps of any famous contemporary architect. But it is also very abstract, generating forms that do not derive from the construction methods typically used for these materials.



Abstract too is Giuliano Gresleri's essay. He describes Botta without actually saying much about the buildings, though he writes extensively about their context. Gresleri's piece is a little like contemporary music criticism, or writings on wine: Many images and metaphors, but the metaphoric frames are remote and opaque. And Gresleri's text is translated so close to the Italian that it sounds stilted. For example: "The cataloger and collector of images … Botta can subject history to an analysis that also permits its recovery, and thus he can imbue design with recognizable meanings."

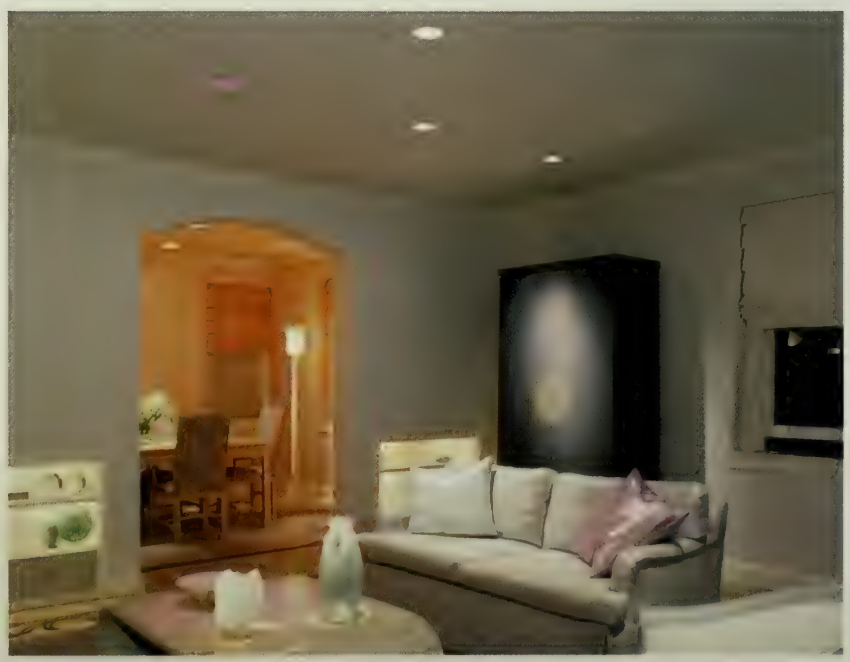
Lionello Puppi waxes even more lyrical. Concerning Botta's origins: "The inspiration for Botta's objective inclination came from the outlines of the hills and mountains of his hometown, Mendrisiotto. These profiles marked the boundaries of the enchanted world of childhood and adolescence…." At least Puppi provides a chronology of Botta's intellectual development and a connection to his Ticino contemporaries and other architects of the 1960s through 1980s. He also mentions Botta's debt to Le Corbusier and Louis Kahn, especially "[Kahn's] exhortation to look to 'the past as a friend.' " Indeed, Botta looked to Kahn himself as a "friend," particularly as regards massing. Gresleri quotes Botta himself about his childhood, saying his mother would exhort him, "Go, and don't waste time." Botta has always been an architect in a hurry.

A final essay by Heinrich Thelen on Botta's drawings, which are liberally sprinkled throughout the text, is totally opaque. The drawings are helpful in understanding his design process, but the plans of his buildings don't adequately inform the reader about the architect's spatial themes. This is a book for the nonarchitect.

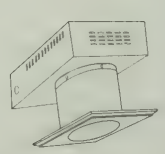
Botta, like Meier, has been true to his origins, and the style of his buildings has changed little: their characteristic motifs and "signature" make them identifiable. Unlike Meier (and perhaps more like Robert Venturi), Botta's work is least convincing, to my mind, in the passages where his signature is most apparent, as in the persistent slot motifs and decorative screens that occur in many elevations of his public buildings and houses.

Botta's newest built work includes the MART (Museum of Modern and Contemporary Art) in Rovereto near Trento, Italy; the Cymbalista Synagogue and Jewish

When a hole in your ceiling is *a good thing.*



Kenneth Rice Photography – www.kenricephoto.com



Our "Hole in the Ceiling" fixtures are plaster/fiberglass castings. They illuminate your space without calling attention to themselves. Call us for more information at 626.579.0943 or visit our website today at www.elplighting.com.

ENGINEERED
LIGHTING PRODUCTS

CIRCLE 75 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



ONCE YOU GET A TASTE OF WORKING WITH STARON,® THE SOLID SURFACE MATERIAL BY SAMSUNG, YOU'LL BE BACK FOR MORE. That's because Staron offers more than 50 colors and a full line of sinks and bowls to complement any commercial or residential design. It's also durable and a great value that leaves room in a budget for other key upgrades. And with Staron, you can include custom inlays, backsplashes and edge treatments in your designs. To learn more about how Staron can sweeten your projects, visit **www.getstaron.com/design3** or call **1.800.795.7177 ext. 350.**

COUNTERTOP | **PEBBLE GOLD** SINK | **BRIGHT WHITE**

staron®

© 2005 Cheil Industries Inc. Staron has been certified by NSF International under its NSF51 rating for food zones.

CIRCLE 76 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Heritage Center in Jerusalem; and the Piazzale della Pace in Parma, Italy. The last is one of the architect's finest works, in my opinion, recalling the best of Carlo Scarpa's buildings of a generation ago. (Botta studied at the University of Venice near the end of Scarpa's tenure.) As is made clear in this book, the Piazzale della Pace exemplifies what is best in Botta's work: a sensitivity to scale, materials, and massing in the dense urban contexts in which his projects are located. *T.S.*

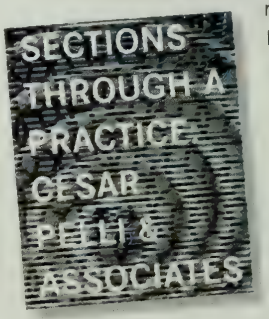
Sections Through a Practice: Cesar Pelli and Associates, *edited by Raul A. Barreneche. Germany: Hatje Cantz Verlag, 2004, 247 pages (4 lbs), $40. (Distributed in the U.S. by D.A.P.)*

The title *Sections Through a Practice* could allude to how the work is presented—as if an egg slicer got to the graphics. The format and Bruce Mau's design tend to make many of the images unintelligible. The book includes a pullout, foldout chart of elevations of the tall buildings Pelli has built, from the tallest, 1,483 feet, to a mere 283 feet. It is a very impressive array of built work, but it's difficult to imagine why the foldout is also a pullout. (Do the editors expect us to hang it on our living room wall?)

Graphic design has run amok here. Raul Barreneche's short introduction superimposed over what must be the metaphoric "section" of Pelli's practice is almost impossible to read. The rest of the illustrations are artful, but not particularly edifying or explanatory.

Following 13 pages of uncaptioned photos of Pelli's studio, we are treated to photo portraits of Pelli's tall buildings and then to close-ups of curtain walls, some of which are very elegant. But it would be nice to see some details, wall sections, and such.

When we get to the two primary essays, by Joseph Giovannini and Hiroyuki Suzuki, our frustration abates a bit. Giovannini describes Pelli as an ideological agnostic, whose work, like that of his mentor Eero Saarinen, is a poetic expression of the program and can, therefore, vary from project to project. Giovannini's essay, while waxing a bit too poetic at times, is clear and progresses logically. Suzuki's places Pelli's work in its historic and geographic contexts. Again, the typography makes these pieces difficult to read.



Trying to find anything in this book is frustrating, and the frustration is compounded by the "Inventory" in the back, where single photos of various buildings tease us into thinking we might find them in the text. No such luck.

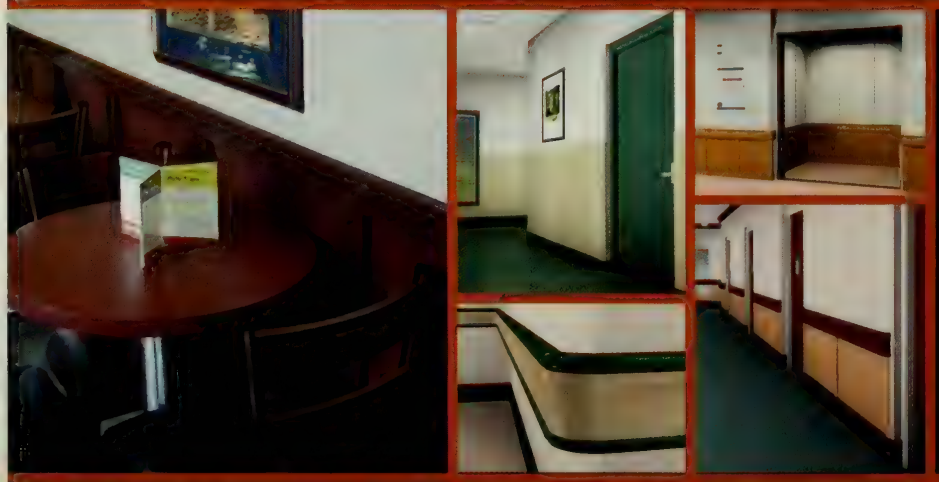
You have to wonder what audience this tome is aimed at. Architects will want more: plans, sections, documentation of the work. Nonarchitects will need more general essays. An architect of Pelli's stature deserves much, much better, and his low-rise buildings deserve more coverage. *T.S.*

Airports: A Century of Architecture, *by Hugh Pearman. New York: Abrams, 2004, 240 pages, $75.*

Naked Airport: A Cultural History of the World's Most Revolutionary Structure, *by Alastair Gordon. New York: Metropolitan Books, 2004, 305 pages, $28.*

For all our complaints, airports remain evocative portals to faraway worlds, both concrete and intangible. At once building type and social phenomenon, airports epitomize

Good Looks & Integrity



Kwalu offers a complete line of virtually indestructible wall protection systems. We offer a 10-year warranty on construction and finish and multiple mix 'n match options. Contact us at 800.405.3441 or www.kwalu.com.

Wainscot Paneling · Handrails · Door Protection
Wall Covering · Wall Guards · Corner Guards · Wall Base

Kwalu®
virtually indestructible

CIRCLE 77 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Introducing environmentally friendly C/S Acrovyn® 3000.

New PVC-Free Acrovyn® 3000 performs better than traditional Acrovyn Wall Protection. **It has the same outstanding impact resistance, Class I fire rating, universal code compliance and comprehensive color range.** But the important difference you can't see with Acrovyn 3000 is its built-in protection for our environment. For literature detailing the comprehensive Acrovyn 3000 line - including Wall Covering - and its timely, exciting benefits, **call 1-888-621-3344 or visit www.c-sgroup.com.**



CIRCLE 78 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

See us at Booth #3242 AIA Convention



our collective obsession with time and space, making them a particularly appealing subject for a book. But a difficult one, too: Airports are always changing, inherently fragmented, and complicated by engineering and logistical issues.

Hugh Pearman, architecture correspondent for *The Sunday Times* in London, and Alastair Gordon, contributing editor to *House & Garden* and *Dwell*, have both risen admirably to the challenge, but with strikingly different approaches. Gordon's *Naked Airport* offers an engaging, breakneck narrative of airport history since the 1920s. Pearman's far weightier and more architecturally focused *Airports: A Century of Architecture* illustrates a thematically organized approach with hundreds of beautiful, large, and often surprising color photographs. Differences in format aside, the two books are, in many ways, reciprocal: Gordon's is anecdotal and playful, while Pearman's is analytical and thorough.

But if Gordon's *Naked Airport* is more fun, its story is sadder. As he tells it, airports' best days are behind us, having peaked in a fleetingly glorious jet age in the early 1960s before commencing a death spiral to what Gordon terms "the sterile concourse" of today. The first chapters are evocative and fresh, full of aviation derring-do and colorful anecdotes from the early jet-set period. Gordon's handling of Juan Trippe, the visionary behind Pan Am's early growth in the 1920s, for example, is beautifully evocative, as is the tale of Fiorello La Guardia and the creation of his namesake New York airport. In these chapters, the book meets its ambition of being a cultural history: It draws a fuller picture of airports' social relevance by focusing on them as places rather than buildings and bringing in a range of literary and pop-culture references. But in the end, Gordon's total lack of affection for the post-1960s era leaves what would seem some exciting stories untold. Not even Norman Foster's Chek Lap Kok in Hong Kong escapes unscathed from Gordon's declaration that at airports, "all vestiges of utopia have been lost."

Pearman's view is more triumphant—perhaps because *Airports*' perspective is more architectural; it deals far less with travel's faded glamour. It matters as well that Pearman's tastes run to the high-tech. As a London-based critic and the author of a monograph on Nicholas Grimshaw, his heroes of airport design are clear: Eero Saarinen (of course), Grimshaw, Renzo Piano, Norman Foster, and Paul Andreu, but also workhorses like HOK and Fentress Bradburn. Indeed, Pearman shows surprising and ultimately enlightening patience in tracing the influence of the American megaterminals (Dallas and Atlanta, primarily) on the next global generation, and also in recognizing the importance of planning and engineering on the continuing evolution of the building type. As a writer for the popular press, his prose is always clear, but in recognition that this is a serious book for a serious audience, his conclusions are never flip. The result is the rare coffee-table-size book that is a comprehensive, nuanced work of scholarship.

Bring *Naked Airport* on the plane; but keep *Airports* close to your desk at work. *Andrew Blum*

Since 1955 Kalwall® 50 Years of Innovation!
...Light-Years Ahead!™

The leader in daylighting.

The most highly insulating fenestration... LEED™ credit Contribution in 6 separate catergories.

Now... with Super-Insulating Nanogel®.

800-258-9777 (N. America)
See more at kalwall.com

For monumental, translucent clearspan Skyroof™ systems, consider our strategic partners...

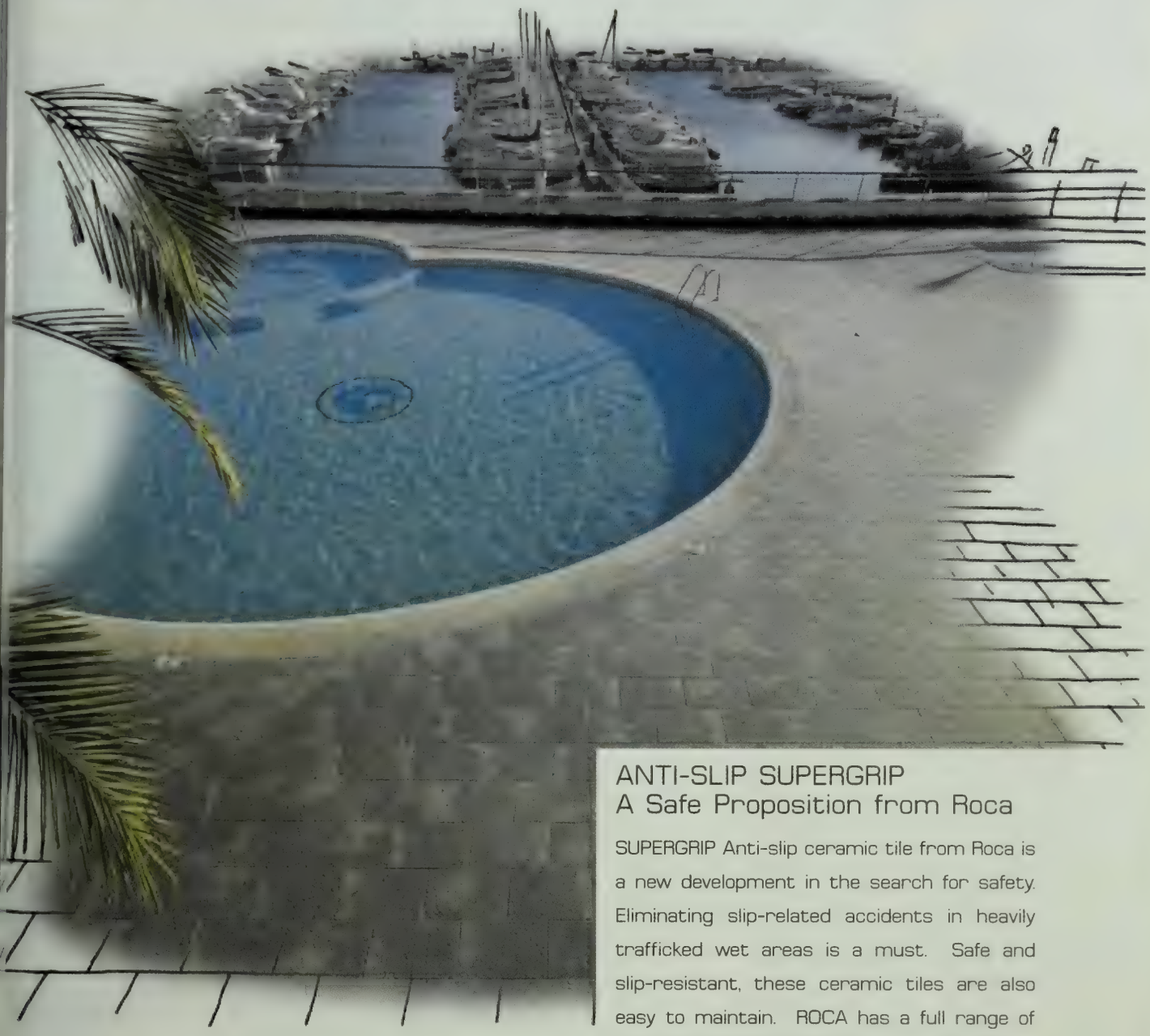
Structures Unlimited, Inc.

And for tensioned fabric structures...
SPAN SYSTEMS, INC.

CIRCLE 79 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/


Fletcher Priest Architects; Chris Gascoigne/View Photo

SUSTAINABLE ARCHITECTURE



ANTI-SLIP SUPERGRIP
A Safe Proposition from Roca

SUPERGRIP Anti-slip ceramic tile from Roca is a new development in the search for safety. Eliminating slip-related accidents in heavily trafficked wet areas is a must. Safe and slip-resistant, these ceramic tiles are also easy to maintain. ROCA has a full range of ROCK&ROCK SUPERGRIP products that meet European and American safety standards.

Rock & Rock

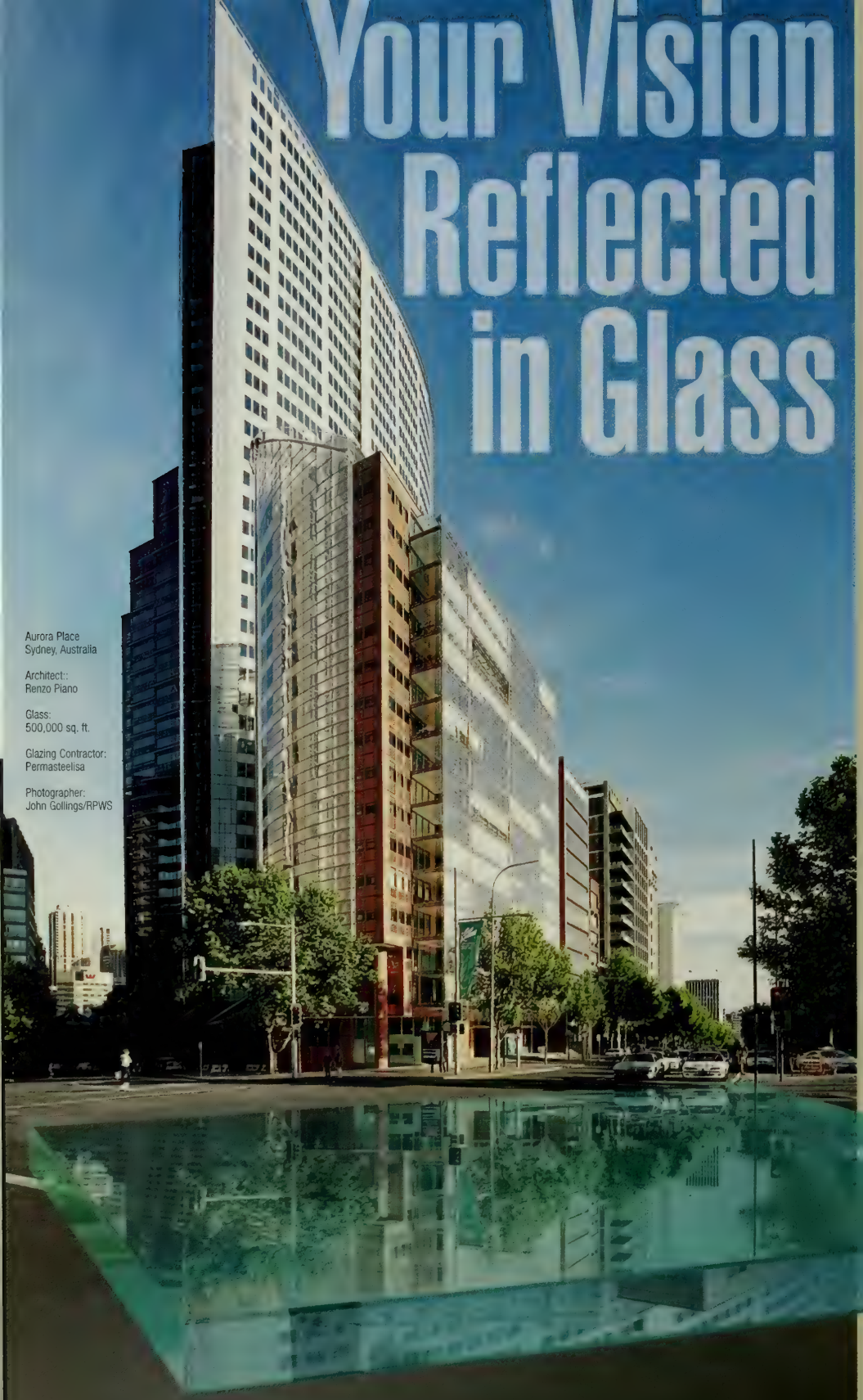
Projects Department
proyectos@rocatile.com

Roca

Visit us at the Tile of Spain Pavilion at AIA, Las Vegas, May 19-21, Booth #4046.

CIRCLE 80 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Your Vision Reflected in Glass



Aurora Place
Sydney, Australia

Architect::
Renzo Piano

Glass:
500,000 sq. ft.

Glazing Contractor:
Permasteelisa

Photographer:
John Gollings/RPWS

To mentally picture something never experienced is to have vision. It's what sets you apart.

Whether your vision makes a creative splash against a city skyline…introduces a high-tech solution for environmental comfort…or is grounded in a more straightforward approach…Viracon is the "go to" company for architectural glass. **With Viracon, you'll have access to the most complete range of products and services offered worldwide.**

Rest assured, the glass you specify will perform just the way you planned. We've got you covered with over 30 years of experience; unparalleled technical expertise; and all glass fabricating processes under one roof.

Partner with Viracon and see your visio reflected in glass.

insulating
laminated
silkscreened
spandrel
hurricane-resistant
acoustical
blast-mitigating
tempered
heat-strengthened
high-performance coated

VIRACON

"The Leader in Glass Fabrication"™

For information on our glass products, or to have a Viracon representative contact you:
Call toll-free: **(800) 533-2080**
Or call: (507) 451-9555
Visit our web site: **www.viracon.com**
E-mail: glass@viracon.com

Be first to know when we announce new glass products! Just send your e-mail address to glass@viracon.com – and tell us to sign you up for *Viracon Update*, our free monthly electronic message.

CIRCLE 81 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

©2003 Viracon, 800 Park Drive, Owatonna, MN 55060

Snapshot

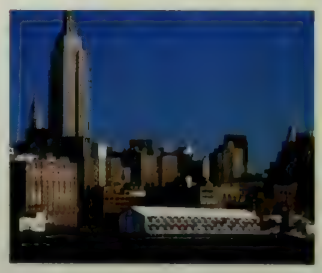


By Beth Broome

A traveling museum transports urban visitors

Artist Gregory Colbert wanted to share his photography with the world, but was not interested in displaying it in an existing museum or white-box space. So in 2000, he approached Japanese architect Shigeru Ban to design a temporary, transportable museum for his show *Ashes and Snow*, a collection of sepia-toned prints depicting wild animals and humans communing in exotic settings. The resulting 45,000-square-foot Nomadic Museum, which opened on March 5 on Manhattan's historic Pier 54, at first glance could be mistaken for a meticulously stacked pile of shipping containers awaiting pickup by a cargo vessel.

Initially, Colbert had envisioned the museum as one of Ban's signature paper-tube structures. While the architect's first attraction to this unusual building material had nothing to do with its sustainability, it was just this quality that drew Colbert to his work. "Colbert liked what I was doing," says Ban, "reusing existing material and finding a different meaning for it." Ban immediately realized, however, that transporting a museum of this sort would be prohibitively expensive. Borrowing on the principle for his 1998 design for a small traveling exhibition of furniture, Ban proposed to employ steel shipping containers as the principal building unit for the museum. Not only could the containers serve to transport other building components, but additional ones could easily and inexpensively be rented throughout the world, so most





Shigeru Ban's Nomadic Museum offers New York City visitors a moment of silence on the edge of a frenetic city. Soon, the museum will pack up and bring the show to Los Angeles and points beyond.

material would not have to be transported at all. A total of 148 containers form the boxlike structure, arranged in a checkerboard configuration with PVC membrane covering the openings. Colbert, who Ban says gave him the freedom to design, was pleased with the decision and particularly appreciated that the world-traveled containers imbued the project with their own histories.

While Ban says he was not inspired by Colbert's art, per se, the idea to articulate the different world of each photo influenced the interior design. Two rows of 2½-foot-diameter recycled paper tubes not only support the trusses for the pitched PVC roof, but also form a majestic colonnaded gallery that gives space to the individual photos. A central walkway made of recycled scaffolding planks runs down the center, bordered on either side by banks of river stones.

The second stop for the museum, on which Ban collaborated with his New York City–based partner Dean Maltz, will be the Santa Monica Pier in Los Angeles. There, Ban will reconfigure the building blocks to fit the site's dimensions, creating a similar, though unique space. This evolving and adaptive nature will, no doubt, come to be one of the project's defining qualities as it travels the world.

Despite all his efforts, Ban's hope is for the museum to disappear and become a backdrop to the art. "It's like going into a cathedral," he says. "First, you're really amazed by the space, but after you sit down and start praying, the space is almost gone." The Nomadic Museum is, indeed, a temple of sorts: a spiritual cloister that shutters out the drone of New York's West Side Highway and the helicopter traffic just beyond its walls. Whether or not the building, in all its quiet splendor, is capable of becoming invisible, however, is another question altogether. ■



In 1955, Thermador invented the first built-in oven, forever changing the face of the American kitchen. This year we celebrate the 50th Anniversary of this historic milestone with a new collection of ovens offering state-of-the-art features and classic American style. When professional architects and designers want to create a kitchen that makes a bold and dramatic design statement, while offering the advanced functionality that today's consumers demand, Thermador is the brand of choice. Thermador, empowering the kitchen enthusiast for more than 70 years.

WWW.THERMADOR.COM 1-800-656-9226

Thermador® | *An American Icon™*

CIRCLE 82 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Mortar Net®
USA LTD.

with mortar net there is NO "or equal"



Sprint Headquarters
Overland Park, KS



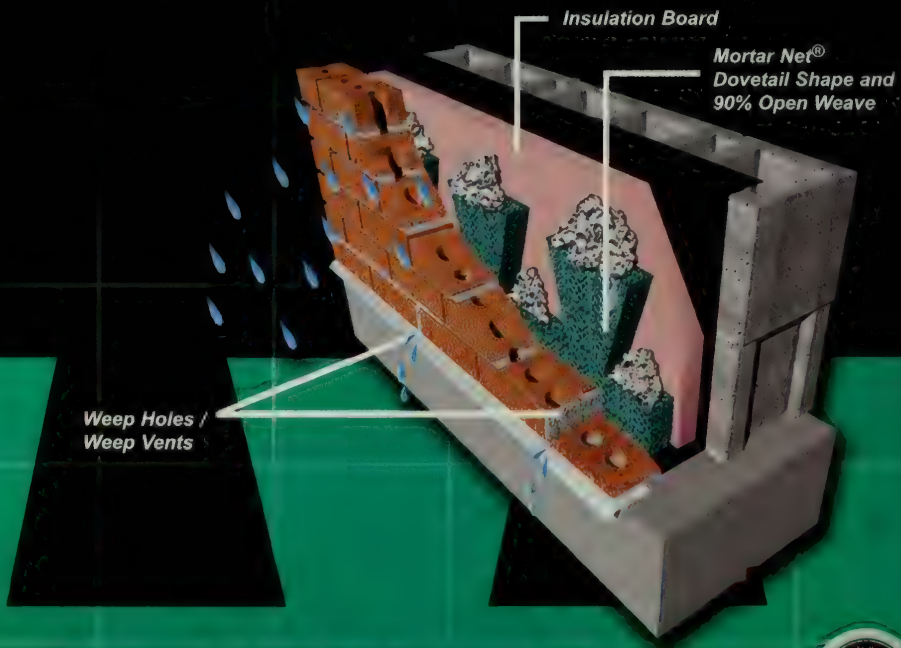
Bricktown Ballpark
Oklahoma City, OK



Sioux City Townhall
Sioux City, IA

At Mortar Net USA, we invent solutions. We've won multiple U.S. patents for our low-cost systems that effectively prevent moisture-buildup in open-cavity masonry walls. These simple to install systems feature a tough, 90% open-weave polyester mesh, with anti-microbial qualities, that lets interior moisture drain to the outdoors, unimpeded by mortar-droppings or debris. By eliminating moisture-buildup, we also eliminated efflorescence and freeze/thaw damage. But best of all, our systems help to deliver in the industry's long-fought battle against mold. With many insurance companies no longer covering mold claims, today's builders insist on our patented moisture-dispersal systems. They've discovered there's absolutely no "or equal" for Mortar Net, BlockNet, or Blok-Flash.*

Source: United States Patent and Trademark Office



800-664-6638
www.MortarNet.com/ar

- Mortar Net®
- Weep Vents™
- BlockNet®
- Blok-Flash®

ARCAT

CIRCLE 83 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



architecturally inspired, passionately engineered

a breathtaking, handcrafted experience

beauty and scale eclipsed only by its ability
to blend seamlessly into the kitchen landscape

BLANCOPRECISION Series

zero radius bowls ▪ nine new designs ▪ a whole new benchmark

BLANCO

800.451.5782
www.blancoamerica.com

Stainless Steel Sinks • Silgranit® Sinks • Kitchen Faucets • Bar Sinks & Faucets • Custom Sink Accessories

CIRCLE 84 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The David L. Lawrence Convention Center in Pittsburgh utilizes 175,000 sq. ft. of Alucobond Material and is the largest building in the world to receive LEED™ certification.

ALUCOBOND®

The original aluminum composite material.

It speaks volumes about green.

Shaping The Future

Alcan Composites USA Inc. • 800-626-3365 • www.alucobond.com

ALCAN COMPOSITES

CIRCLE 85 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

American Institute of Architects

2005 Honor Awards

Architecture p. 116
Interiors p. 130
Urban Design p. 146
25 Year Award p. 152
Firm Award p. 156
Gold Medal p. 162

Every spring, RECORD provides editorial coverage of the winners of the AIA Honor Awards, which represents the highest recognition of excellence in architecture, interior architecture, and urban design. Projects were selected from more than 630 submissions, with 35 recipients to be honored later this month at the AIA National Convention and Expo in Las Vegas. In addition, in this issue we feature the Gold Medalist, the Firm of the Year, and the 25 Year Award winners.

The jury chairs included Thomas W. Ventulett III, FAIA, chair for architecture, who felt the winners conveyed exceptional qualities of light, space, craftsmanship, sustainability, and context. The chair of the interior design jury, Mark McInturff, FAIA, saw a strong connection of project to place through evocative use of materials and elegant detailing. Michael Willis, FAIA, chair of the urban design jury, said, "This year's projects were all about community-building and grappling with the differences of edge and place, in order to make meaningful connections to people." Architects are forever harmonizing competing interests in the realization of their work, one of their singular talents.

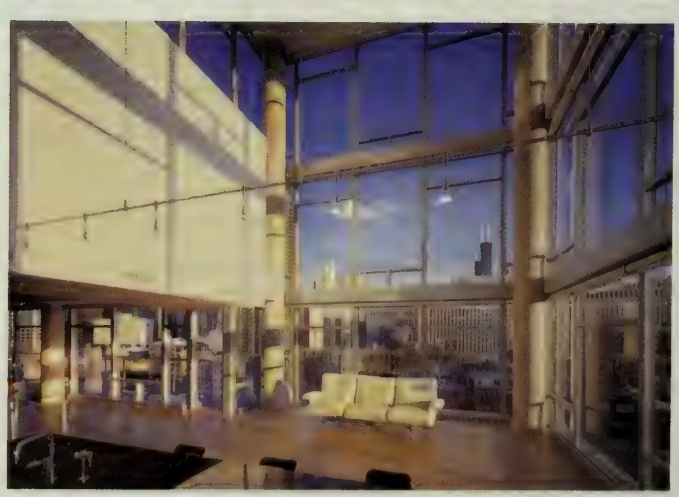
Santiago Calatrava, FAIA, the brilliant architect-engineer, received the 61st AIA Gold Medal. In recognition of his legacy to architecture, his name will be engraved in a granite wall in the lobby of AIA headquarters in Washington, D.C. The Yale Center for British Art, designed by Louis I. Kahn, FAIA, received the 25 Year Award. The jury noted, "[This building] is one of the quietest expressions of a great building ever seen—so rewarding and exhilarating when you step inside." And lastly, the Chicago firm of Murphy/Jahn received the Firm Award, the highest honor the AIA bestows on an architecture firm, for their consistently forward-looking vision. In honor of these winners, RECORD is presenting their work on the following pages. Jane F. Kolleeny

ARCHITECTURE



"Moves beyond Miesian forms to create a compositional expression viewed from every side."





1. Contemporaine at 516 North Wells
Chicago
Architect: *Perkins+Will*

Although this 28-unit condominium tower rises higher than most buildings in Chicago's River North area, a neighborhood of warehouses converted for residential and retail use, its sculptural quality and the articulation of its different functional parts allow it to blend seamlessly into the scale of its surroundings. The building's four-story base contains retail and parking. A glass curtain wall helps enliven the street by revealing the automobile ramps and structural bracing. An 11-story residential tower rises from this base. To create visual energy, the architect "eroded" one corner of the tower and cantilevered balconies on another corner.



2. Agosta House
San Juan Island, Wash.
Architect: *Patkau Architects*

Built for clients who were relocating from Manhattan, this 2,775-square-foot residence is situated on a 43-acre estate on rural San Juan Island, Washington. The exterior is clad in light-gauged, galvanized sheet steel, which provides protection against both the weather and forest fires. Exterior walls and roof lines are sloped to mimic the natural grade surrounding the house. The geometry extends into the interior spaces, where nonstructural bulkheads define smaller rooms. Resting on a concrete slab foundation, the structure is a combination of fir timber framing, which is left exposed, and conventional stud framing, which is clad in painted gypsum board.

"Placed in such a way to preserve the integrity of the site, this residence allows the clients to live in harmony with nature."







3. Conservatory of Flowers
San Francisco
Architect: *Architectural Resources Group in collaboration with Tennebaum-Manheim Engineers*

Located in San Francisco's Golden Gate Park, the Conservatory of Flowers survived countless earthquakes since it opened in 1878. But a series of winter storms in 1995 proved too much for the delicate greenhouse and forced its closure. The architect and engineer collaborated to repair and restore the historic building, insert an HVAC system, and strengthen the structure against lateral forces. The work included replacing wood arches inside the greenhouse that had rotted as a result of humidity. The architect also developed a master plan for the site that includes space for new galleries, administrative offices, and restrooms.

"A glowing icon for the park at night, ornate celebration of greenhouse by day."



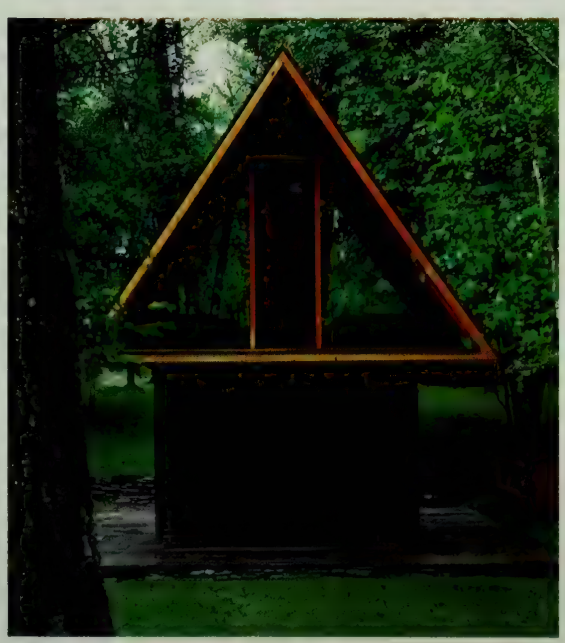




4. Emerson Sauna
Duluth, Minn.
Architect: *Salmela Architect*

"Simple, spare, elegant use of natural materials. Sheds the water like a duck's back."

Built for clients who grew up with the Minnesotan tradition of sauna bathing, the Emerson Sauna is a provocative arrangement of forms and materials. The sauna room is located on ground level and lined with brick walls, not wood, to allow for radiant heating. Cantilevered from one end of this room is a triangular-shaped upper story that contains a cooling porch. It is essentially a long tube, formed by tightly packed wooden framing, open at both ends to allow breezes to pass through. A vented lap-board roof protects the tube's structural elements, while sod covers the sauna's roof.









"Barns have finally achieved their heyday in this simple structure located in the hills of California."

5. Somis Hay Barn
at the Lucky Dog Ranch
Somis, Calif.
Architect: *SPF:a*

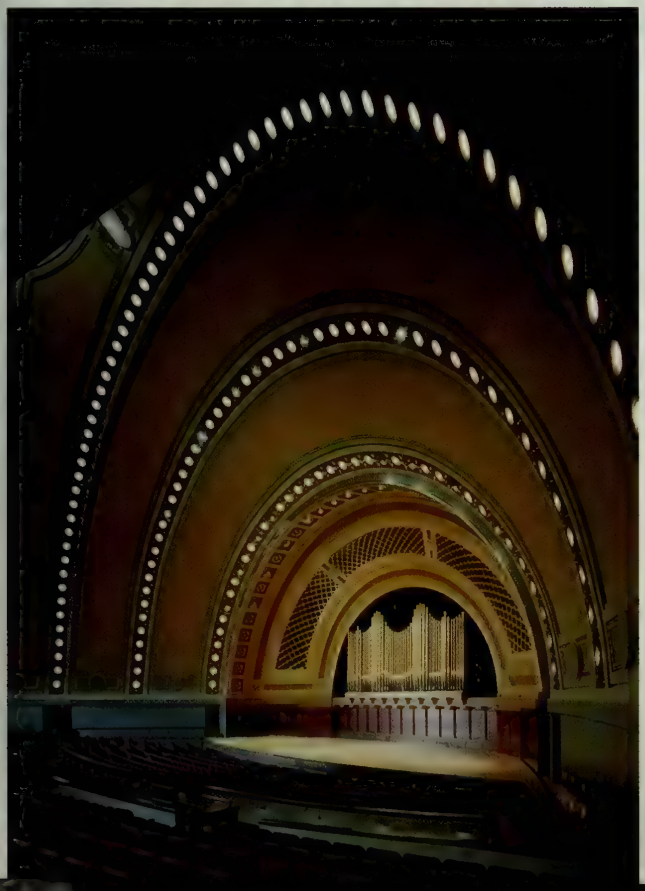
In designing this barn and stable, the architect was guided by two contrasting styles: the rhythmic rigor and permanence of Modernism, and the rough, ever-changing quality of *wabi-sabi*, a Japanese aesthetic that finds beauty in imperfection. Modernism's order is expressed by the barn's sleek 12-by-12-foot structural steel system, while *wabi-sabi* is represented by the impermanent nature of the bales of hay that line the exterior walls, insulating them and acting as a windbreak. The hay changes odor and color and is used up one bale at a time, for bedding and feed.

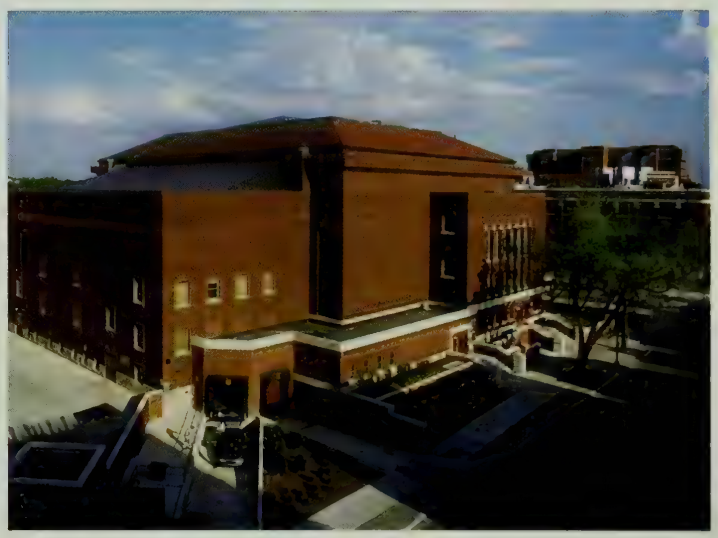


6. Hill Auditorium
Ann Arbor, Mich.
Architect: *QUINN EVANS/ ARCHITECTS (restoration architect); Albert Kahn Associates (architect of record)*

The University of Michigan's Hill Auditorium is a Classical Revival work originally designed by Albert Kahn. When it opened in 1913, the acoustics of the parabolic performance hall were among the best of its day. The school engaged QUINN EVANS to restore the 3,575-seat auditorium, as well as the building's lobby, monumental stairs, and entrance plaza. It also sought to update mechanical and electrical equipment. A new lower level was created to house gallery spaces, restrooms, and HVAC equipment. This allowed for an expansion of the lobby and the addition of two elevators. A new grade-level entrance now allows handicapped access.



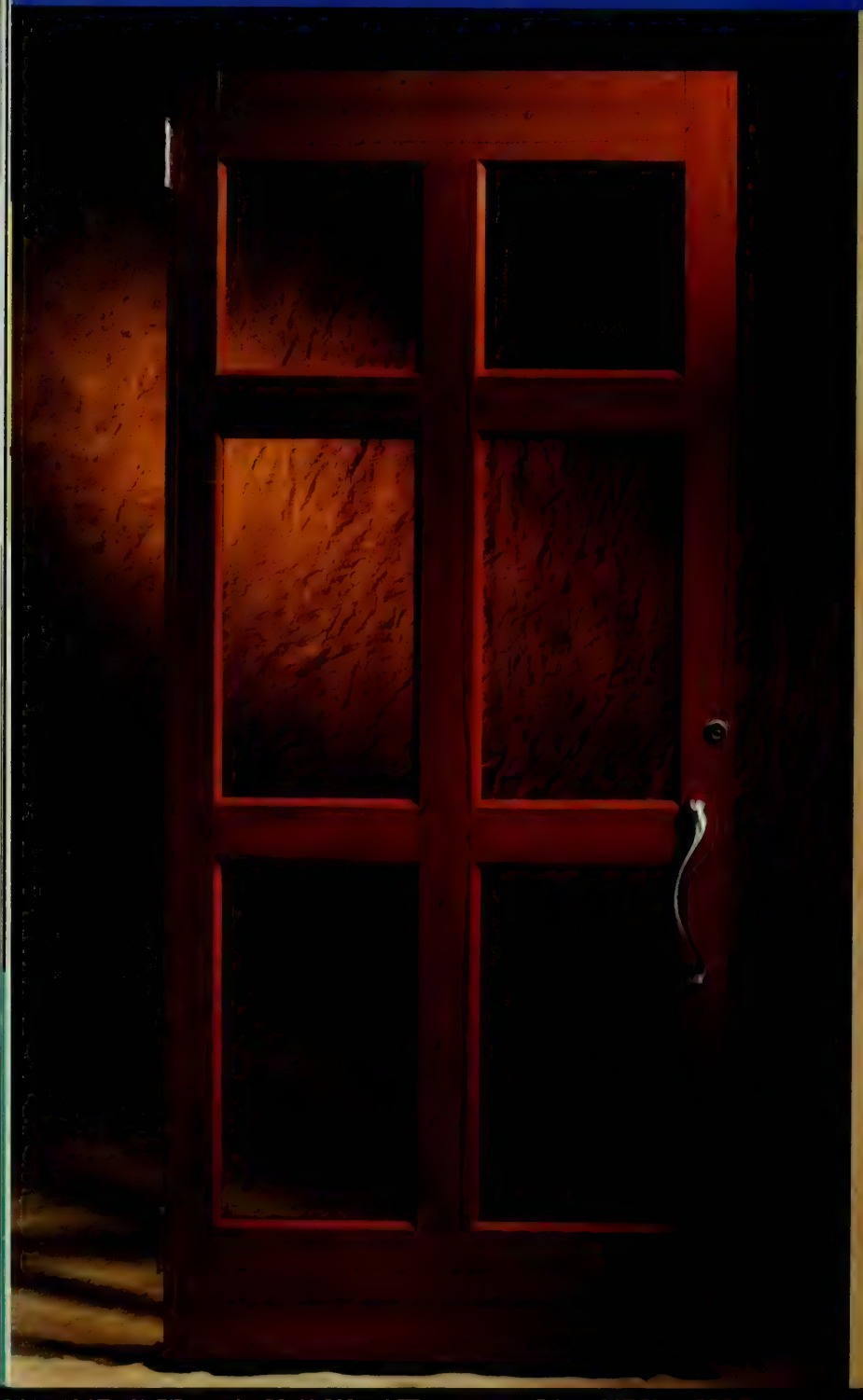




"The architect played a restrained hand in the restoration of the auditorium's features."

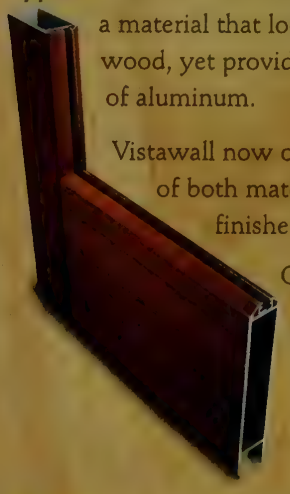
LOOK CLOSELY. IT'S NOT WOOD.

Introducing Natura™. Aluminum inspired by nature.





Natura™ finish is aluminum that provides everything you love about beautiful wood. Our process creates a natural wood-grain appearance that is baked into the finish for a material that looks as good as wood, yet provides all the benefits of aluminum.



Vistawall now offers you the best of both materials in ten wood finishes.

Go with the grain.

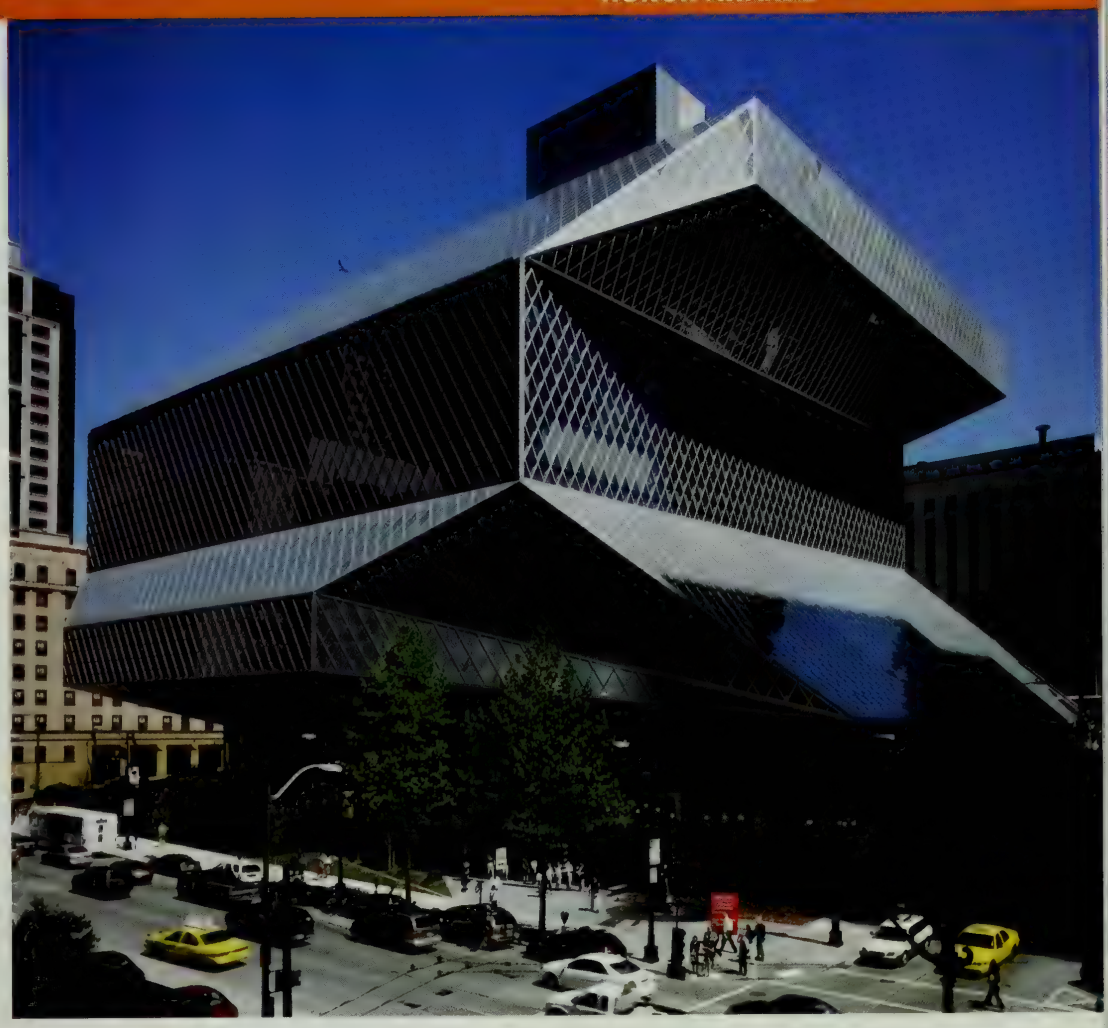
VISTAWALL®
ARCHITECTURAL PRODUCTS

800-869-4567 natura@vistawall.com

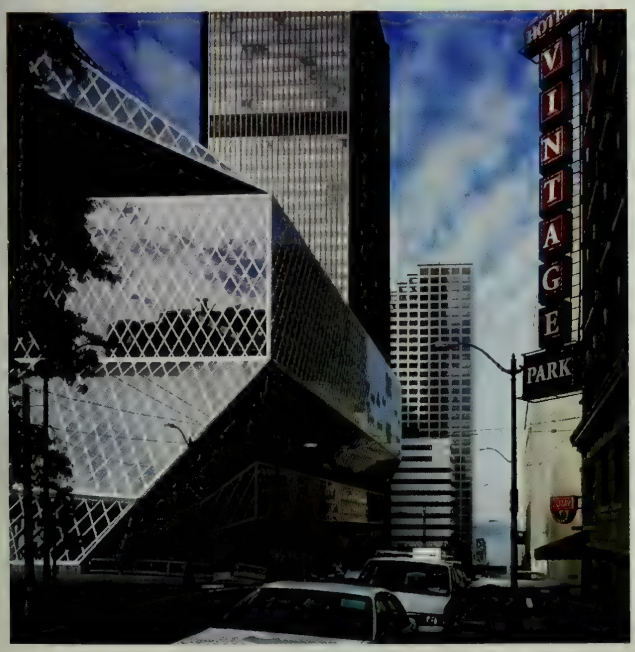
CIRCLE 86 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

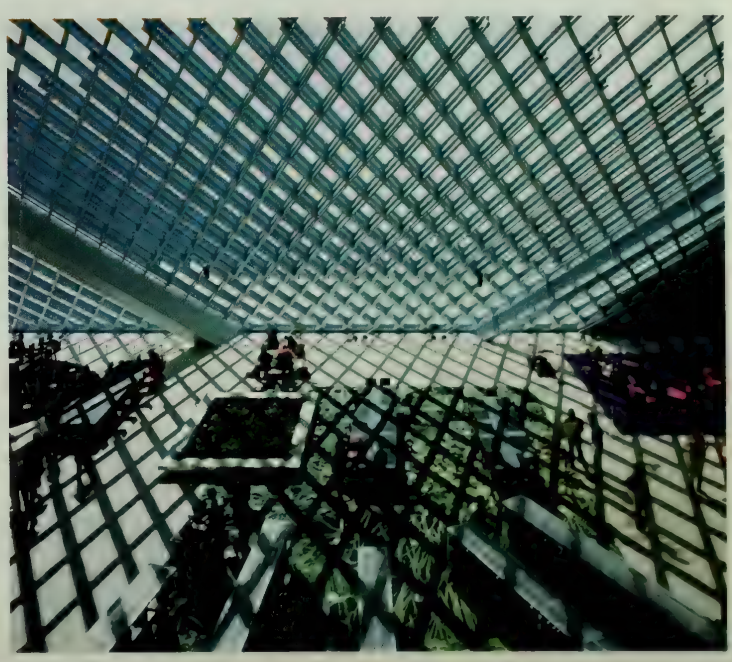
7. Seattle Central Library
Seattle
Architect: *OMA/LMN—A Joint Venture [RECORD, July 2004, page 88]*

The architects sought to give each function of the library its own space, big enough to accommodate future growth, rather than creating generic, unprogrammed rooms. The main reading room, or "mixing chamber," occupies one level; offices another; and books are shelved in a "spiral" of stacks that rises through the building's middle levels. Floor plates vary in size according to the needs of each function, as well as those surrounding it. These varying sizes produce an iconic exterior defined by surfaces that slope out and in, alternately blocking and allowing daylight into the building.



"It is really a beacon for the city."







You've always had to custom-design connectors for exposed residential and commercial wood framing, then have them fabricated and finished. Now you can simply specify them. The new **Architectural Products Group** from Simpson Strong-Tie® offers a wide range of prefinished connectors that combine load-rated structural integrity with decorative architectural detailing. To see the full line visit our Web site, or call 866.860.9011 to learn more.

SIMPSON
Strong-Tie™

www.ExposedConnectors.com/Details9

CIRCLE 87 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

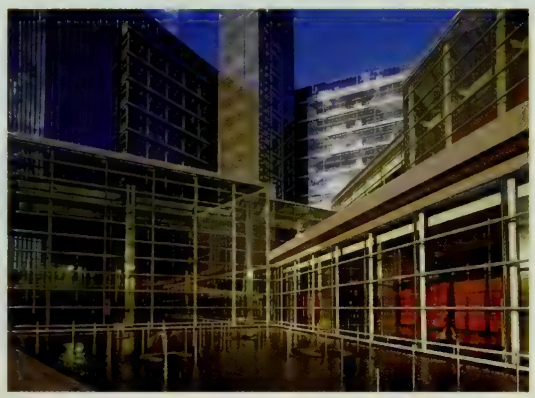


8. Gannett/USA Today Corporate Headquarters
McLean, Va.
Architect: *Kohn Pedersen Fox Associates [RECORD, May 2002, page 212; November 2003, page 102]*

The architect designed this corporate headquarters to be flooded with natural light. Shaped like the letter V, its two wings reach toward a pond that doubles as a storm-water-retention basin. The building's two narrow wings mean that most offices, newsrooms, and common spaces receive ample daylight. The building's exterior is clad in lightly reflective glass that is accented by projecting glass fins, whose beveled edges refract a prismatic spectrum.

"The detail and material resolution transcend the hierarchy of a corporation."





9. Jubilee Church
Rome
Architect: *Richard Meier & Partners Architects [RECORD, February 2004, page 100]*

The architect based the proportional structure of this building on a series of circles and squares. At the church's southern end, three circles of equal radius define the profiles of the three concrete shells that compose the nave. The three shells refer to the Holy Trinity. Secular spaces are confined to the building's northern end. This rectilinear space contains a plaza and community center open to residents from the surrounding neighborhood.



"Spectacular daylight: dappled, kinetic, openness in spirit. The quality of the light is breathtaking."





10. Shaw House
Vancouver
Architect: *Patkau Architects*
[RECORD, April 2002, page 95]

Zoning limited the width of this 3,071-square-foot house to just over 26 feet, so the architect organized spaces vertically: Living areas are grouped at grade level; a music room is located below grade; and private spaces are located above grade. A lap pool runs along one side of the house above grade, reflecting light into lower levels through clerestory windows. The house is constructed of reinforced concrete, left exposed or insulated and clad with painted gypsum board.

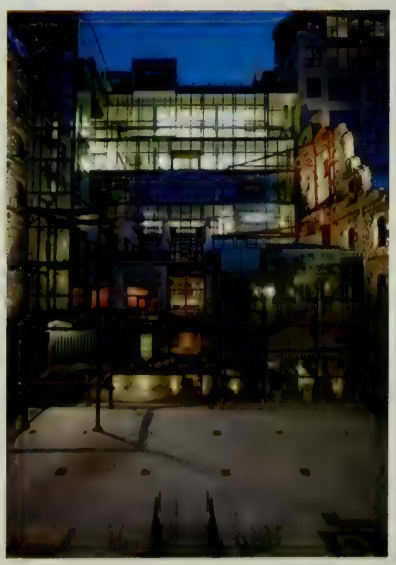
"The water is a thematic strain that ties the house together with spectacular views over Vancouver."

11. Mill City Museum
Minneapolis
Architect: *Meyer Scherer & Rockcastle*
[RECORD, February 2004, page 122]

Touted as the world's largest mill when it opened in 1880, this building—once home to General Mills and Betty Crocker—fell into disuse and was gutted by a 1991 fire. Preservations saved the mill and sought an adaptive reuse for it. The architect inserted a glass-enclosed museum and office spaces into the ruined exterior walls, creating a pastiche of old and new, opening a porous visual connection to the Mississippi River.

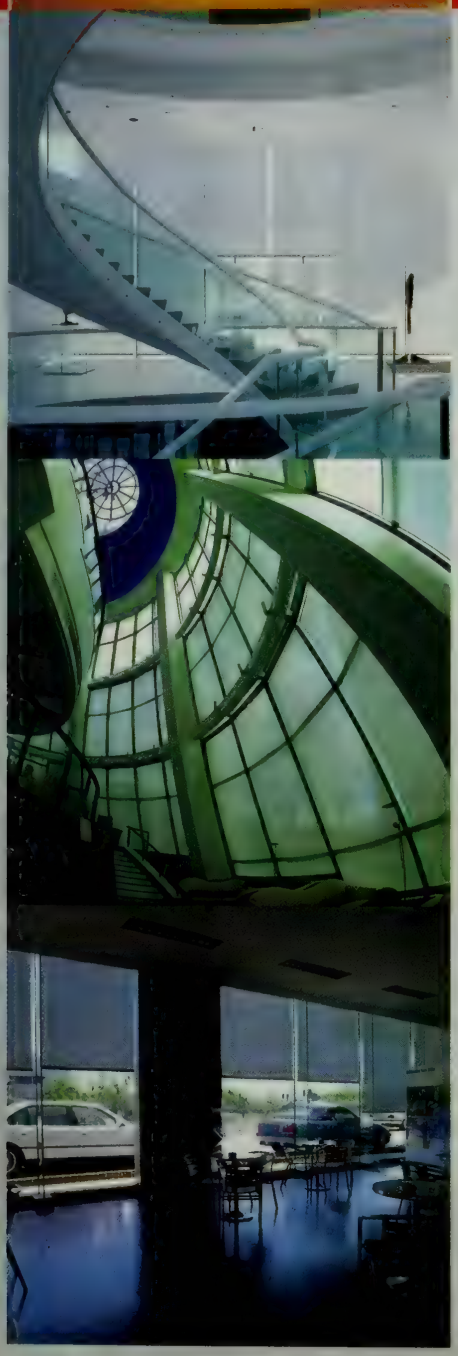
"A complex and intriguing social and regional story that reveals itself as the visitor progresses through the spaces."







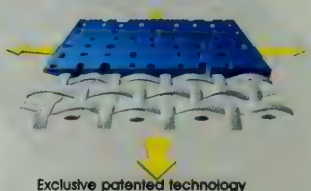
LIGHT PROTECTION AS EFFICIENT AS THE DAY IS LONG.



SOLTIS® 99 SOLTIS® B92-N

SUN, YOU'VE MET YOUR MATCH.™

When it comes to protecting an indoor environment from the harsh glare of the sun, nothing does the job like Soltis®. High-performance Soltis® textiles filter even the most intense sunlight, eliminating the annoying reflections that can make it difficult to work at a computer screen. Yet, they control luminosity and preserve natural light to provide optimum visual comfort. We also offer fabric that provides total black-out, if that's what your environment requires.



Exclusive patented technology
PRECONTRAINT FERRARI

What's more, Soltis® fabrics are manufactured to look and stay beautiful. With our patented Precontraint® technology, Soltis® fabrics are stretched during the entire production process. The result is unrivaled dimensional stability that ensures our textiles will never bag during installation or intensive use. And with our stunning range of fade-resistant colors, Soltis® fabrics integrate easily into all facades, buildings and environments.

See for yourself why more and more architects are specifying Soltis® fabrics for their indoor environments. Call us today at **954-942-3600** or visit us at **www.soltis-textiles.com.** And let us open your eyes to the best light protection solution under the sun.

FERRARI

1510 SW 5th Court, Pompano Beach, FL 33069
Tel 954-942-3600 Fax 954-942-5555 www.ferrari-textiles.com

CIRCLE 88 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

12. Holy Rosary Catholic Church Complex
St. Amant, La.
Architect: *Trahan Architects*
[RECORD, May 2005, page 246]

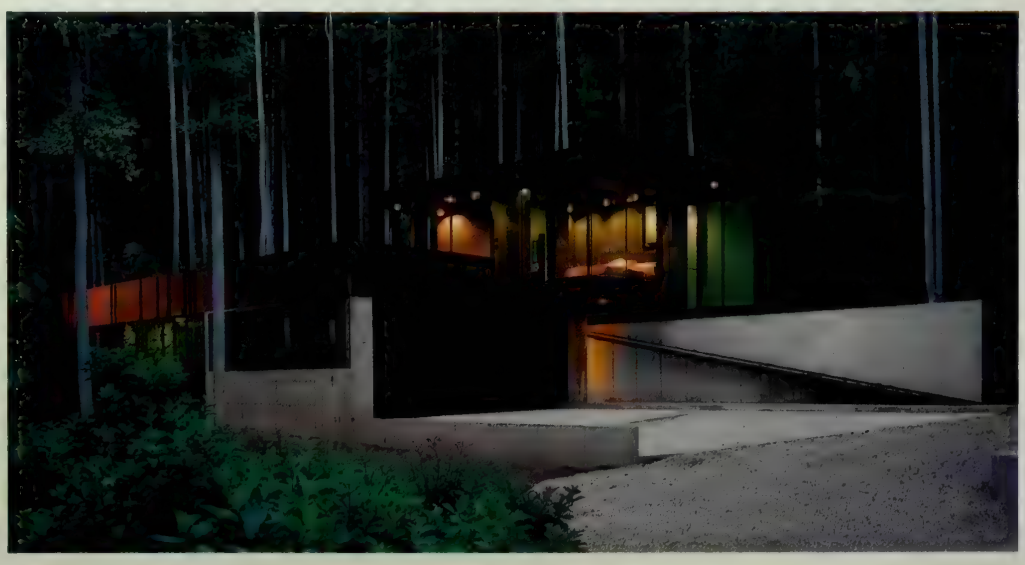
The secular functions of this rural church complex are grouped in perimeter buildings that surround an internal courtyard, at the center of which is a chapel. In designing this sacred oratory, the architect was inspired by the womb: a "pure and comfortable" space that lacks directions such as up and down. Accordingly, all finished surfaces in the chapel are treated equally. Eschewing rare and costly materials, the architect chose a palette of board-formed concrete, plate glass, and cast glass.



"A lovely procession: The journey is as important as the arrival."



"A very special capturing of the landscape in Georgia."



13. Mountain Tree House
Dillard, Ga.
Architect: *Mack Scogin Merrill Elam Architects*
[RECORD, April 2003, page 170]

After the arrival of their grandchildren, the clients wanted to add an extra bedroom and garage to their weekend retreat in the Appalachian foothills of northern Georgia. The garage, which contains a work space as well as storage, is walled by unfinished concrete inset with long windows. The new guest room is cantilevered above the driveway. This volume is clad by walls of both tempered and translucent laminated glass. Movable walls in a new bathroom allow for outdoor bathing.

WATER DELIVERY. ENHANCED.

METICULOUS CRAFTSMANSHIP.
THE FINEST MATERIALS.
FAUCET, ACCESSORY AND LIGHTING ENSEMBLES.
ENHANCE YOUR SPACE, AND MAYBE YOUR SOUL.

DESIGN BY VICTOR HOERNIG, IDSA

SURFACE
ICONICALLY MODERN.



GINGER

T. 866.423.0955 WWW.GINGERCO.COM F. 803.547.6356

© 2005 GINGER® A Masco Company

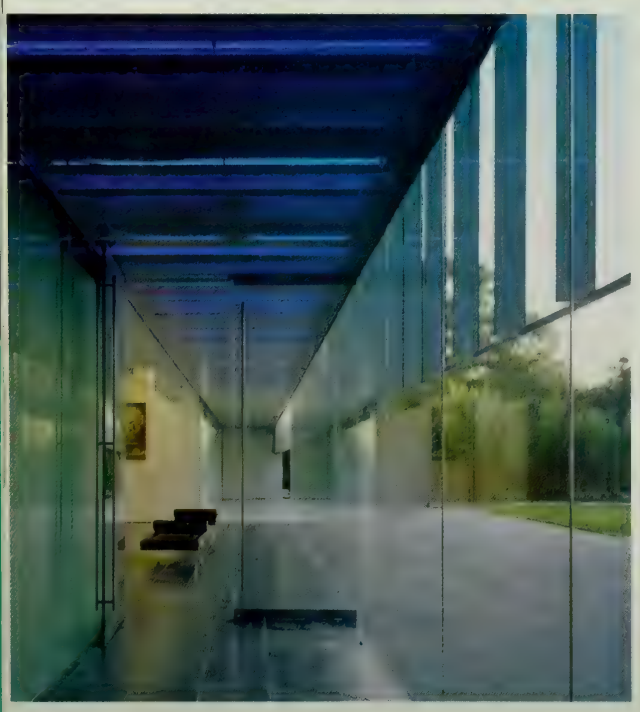
CIRCLE 89 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

INTERIORS



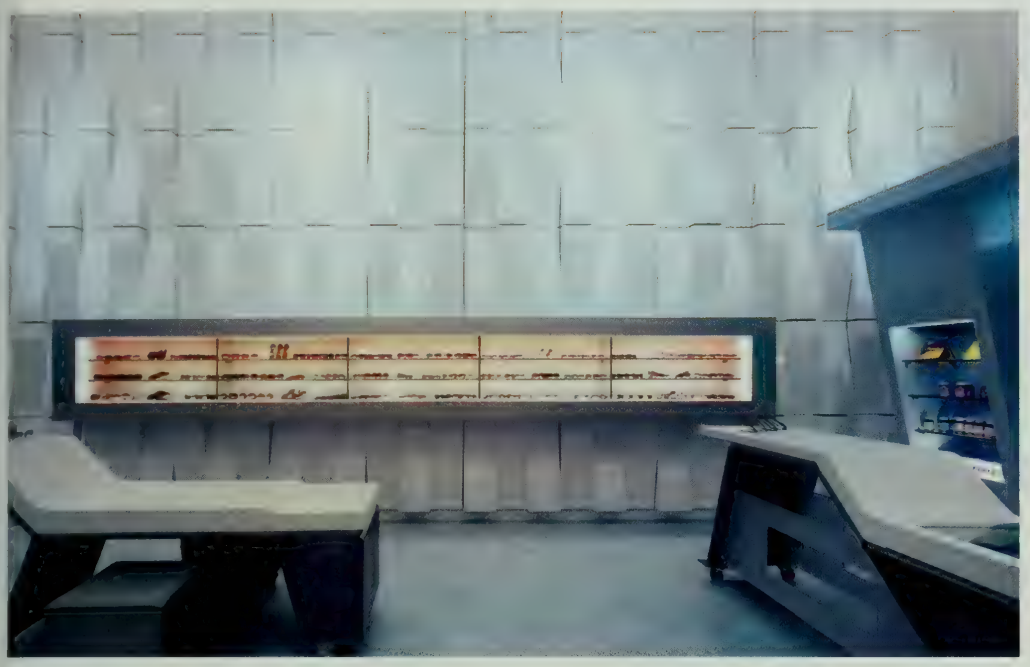
1. Paul and Lulu Hilliard University Art Museum
Lafayette, La.
Architect: *Eskew+Dumez+Ripple*

The new Paul and Lulu Hilliard University Art Museum, a lustrous steel-and-glass structure, is situated adjacent to the University of Louisiana's original museum, a 1960s-era building modeled after antebellum plantation homes. The new museum's glass facade allows views deep into its interior. The connection between indoors and outdoors is reinforced by honed cordosa limestone paving that continues from an outdoor plaza into the ground-floor lobby and up a staircase into an atrium gallery. Glass railings maintain the feeling of openness in the atrium. Gallery spaces are finished minimally with wood floors and painted drywall.





"The gutsy site plan creates a dynamic dialogue between buildings that engages the interiors outward."





"This is a great place to test eyewear—there's a lot to look at."



2. l.a.Eyeworks Showroom
Los Angeles
Architect: *Neil M. Denari Architects*

Like most fashions, eyeglass styles come and go. l.a.Eyeworks, a retailer that specializes in cutting-edge eyewear, wanted a showroom that could successfully accommodate ever-changing trends while providing the retailer with a fixed spatial identity. In organizing the space, a 1,500-square-foot rectangle, the architect suspended a continuous, undulating panel from the ceiling, spanning the rectangle's long axis, to create a strong visual link from the front entrance to the back sales counter. Display shelves line one wall of this axis, while vacuum-formed panels line the opposite wall and provide a flat background for customers' movement through the store.





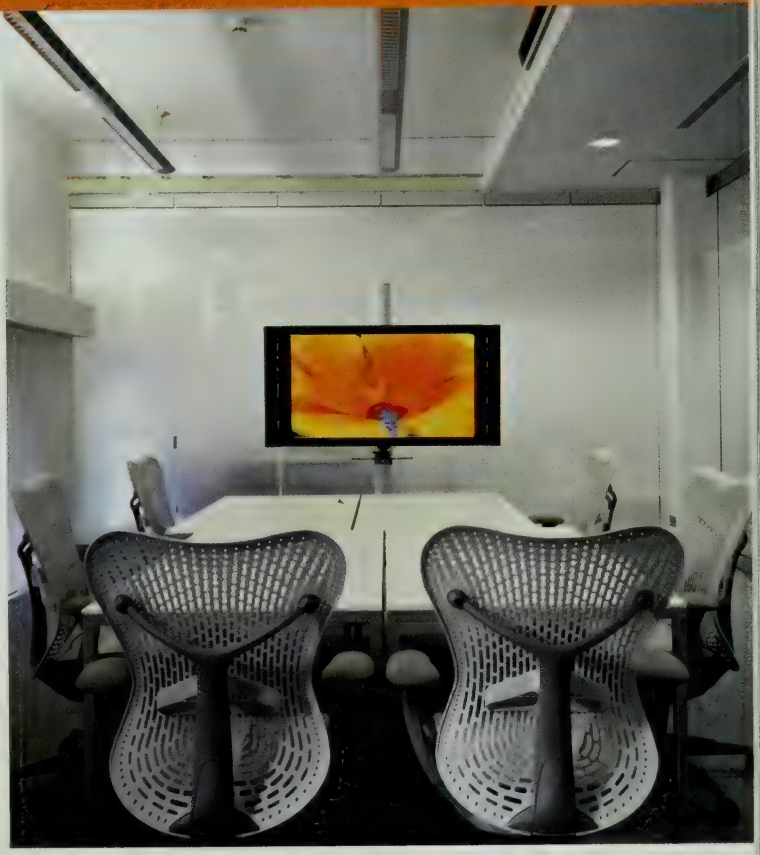
3. Jigsaw
Los Angeles
Architect: *Pugh+Scarpa Architects*

Film editing requires small, dark rooms free from distraction; paradoxically, a film-editing company also needs a stimulating work space to foster social interaction among employees and with clients. The architect succeeded in meeting both challenges inside a featureless, 5,000-square-foot warehouse. The small studio spaces are contained within large interior public areas. Incorporating the client's program of offices, library, socializing zones, and music and editing rooms, the design uses interior walls of unique materials to create new and unexpected pubic and private spaces.

"The materiality is intriguing and inventive. This would make a great party space!"







"The illusion and abstraction of London fog carries the project."

4. AM International
London
Architect: *Elliott + Associates Architects*

For its regional headquarters in London, Ackerman McQueen International, a U.S.-based advertising agency, wanted an office that its clients could easily reconfigure. Inspired by London's famous fog—and the suggestion of creativity and ideas emerging from fog—the architect organized this 1,800-square-foot office around a large conference room that is enclosed by sliding glass walls. The glass affords optical and acoustical privacy, and when viewed from different angles, it possesses both translucent and transparent qualities. Movable furniture allows clients to create their own seating arrangements, while permanent workstations are located at the edges of the floor plate.





Witness Nylon's Metamorphosis

Tussah, part of the Second Nature Collection from Invision. For samples visit www.invisioncarpet.com or call 800.241.4586.

INVISION

WHERE CREATIVE
MEETS CARPET

CIRCLE 365 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

NeoCon Showroom 10-118



5. Elie Tahari Fashion Design Office and Warehouse
Millburn, N.J.
Architect: *Voorsanger Architects*

The client, a fashion designer, wanted to transform an office building located amid a drab landscape of factories and parking lots. To introduce light and nature into the 20,000-square-foot building, the architect created two interior courtyards—containing river birch and bamboo groves—by cutting through the ceiling and concrete floor slab. Glass walls line these courtyards, which are located on the same axis, allowing people to see into both spaces simultaneously and blurring the distinction between interior and exterior. Around the building's perimeter walls, a suspended white scrim emits filtered light and helps soften views of the dull surroundings.

"This project takes a banal existing building type and, with a few deft moves, layers public space, courtyards, offices, and industrial space."









CABINETRY THAT ALLOWS YOU TO STAY TRUE TO YOUR ORIGINAL BLUEPRINT. NOT TO MENTION, TIMELINE AND BUDGET.



Custom cabinetry isn't the only way to meet the demands of your most detailed designs. With six beautiful woods, 32 fine finishes and thousands of storage and style options, KraftMaid's built-to-order cabinetry not only fits your vision, but also fits your budget. So you get the design flexibility and superior construction associated with custom cabinetry, without the higher prices. And with the help of our extensive dealer network and some of the shortest lead times in the industry, you'll keep on schedule and under budget, just as you planned.

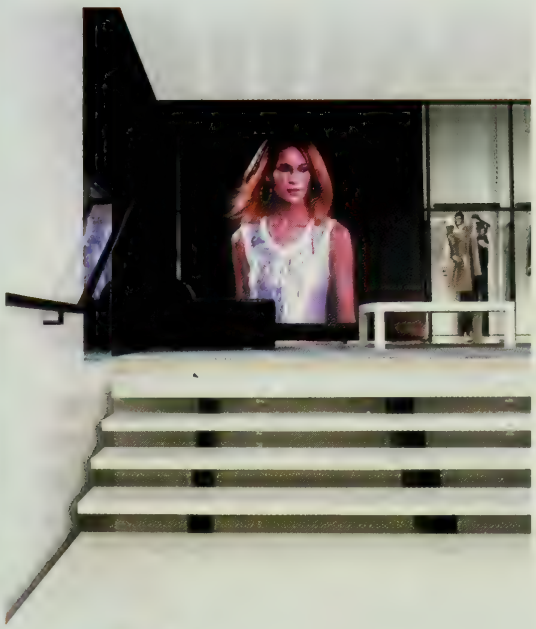
To see how KraftMaid can fit nicely into your plans, call 1-800-919-1986 or visit www.kraftmaid.com.

Made just for you.

KraftMaid Cabinetry

CIRCLE 90 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





"The interwoven antique silk ribbons bring a museum quality to the materials."



6. Chanel, rue Cambon
Paris
Architect: *Peter Marino + Associates Architects; Vigneron Architects (associate architect)*

An expansion and redesign of Coco Chanel's original boutique, the store now encompasses 8,000 square feet in three adjoining buildings. The old space is linked to the new by a staircase, at the top of which is a floor-to-ceiling video wall that showcases Chanel's ready-to-wear collection. The architect weaved the fashion designer's aesthetic into finishes throughout the store. In homage to Chanel's iconic tweed pattern, gold threads highlight carbon-fiber wall panels, while poured-resin panels are inset with diamond dust. Antique silk ribbons, the only remaining original materials from the Coco Chanel archive, are woven into room dividers.





"It's like a piece of jewelry in its attention to detail and custom-designed elements."



7. East End Temple
New York City
Architect: *BKSK Architects*

Originally designed by Richard Morris Hunt, the building was erected as a private residence in 1883. In redeveloping it for the East End Temple, BKSK Architects retained an elegant library at the building's street side but, in the rear, carved out a multistory volume for the religious sanctuary. The space is cubic and follows proportions described in the Book of Exodus. Above the Torah ark, the ceiling was pulled apart and inset with a skylight, flooding the room with daylight and symbolizing divine presence. Bronze panels engraved with prayers line the walls, recalling the prayers that Jews insert into Jerusalem's Western Wall.



Why is this house and its beautiful windows upside-down? And where's the headline on this ad? By the way, do you know how to make a "Mary Got Hit by a Chicken Truck?" Well, you will. Because we're dropping the recipe right here in the middle of the copy.

MARY GOT HIT BY
A CHICKEN TRUCK
10 oz. tomato juice
1 oz. pepper vodka (optional)
1 tsp. horseradish
dash of hot sauce
pinch of salt
fresh ground pepper

There. That's what we call freedom. Upside-down windows. No headline. Mary Got Hit by a Chicken Truck.

Freedom. It's our mantra. And that's why we offer fifty standard colors, nine wood species, and twelve interior finishes. Not to mention our new VisionGuard™ jobsite protective film. You like the freedom? We think you will.

EagleWindow.com 1-888-74-EAGLE

EAGLE WINDOWS · DOORS

CIRCLE 91 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



8. Pavilion in the Sky
London
Architect: *Peter Marino+ Associates Architects*

The architect designed this 4,800-square-foot residential penthouse for a collector of Modern art. Conceived of as a "pavilion in the sky," the glass-enclosed box represents an exploration of geometry and precious materials. The space is centered on a shimmering cube of onyx that surrounds the building's mechanical core. From the core, a stone entry hall progresses through doors, paneled with Lalique crystal, and emerges into an interior landscape, filled with sculptural objects that mark private areas of the residence.

"It's sensationally over-the-top and fantastic—wow!"





PITTSBURGH PAINTS

pure performance®



Environmentally Gentle

- Green Seal Class A certification
- Zero VOCs
- Ideal for "green building" projects
- Minimal odor during painting and drying
- Paint today, occupy tonight

Superior Performance

- Easy application
- Durable finish
- High hiding
- Excellent adhesion
- Bright, clean white
- Available in in over 1,800 colors from the Voice of Color® design system
- Mold and mildew resistant on the paint film



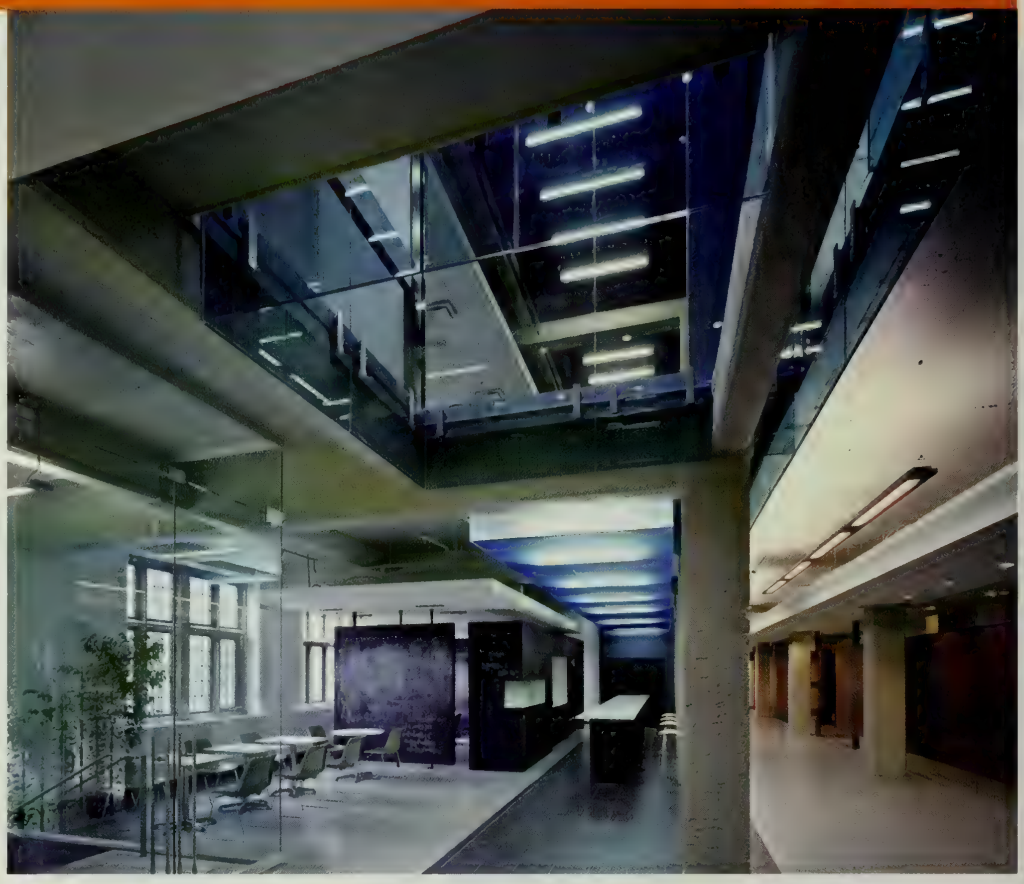
NVIRONMENTALLY GENTLE PAINT THAT
)ELIVERS ***SUPERIOR PERFORMANCE***

r more information about Pittsburgh® Paints,
it **www.pittsburghpaints.com** or call **1-800-PPG-SPEC**

CIRCLE 92 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

9. James Stewart Centre for Mathematics
Hamilton, Ontario
Architect: *Kuwabara Payne McKenna Blumberg Architects*
[RECORD, September 2004, page 148]

Opened in 1929 to house McMaster University's science department, this neo-Gothic building was converted into a student center in the 1960s. More recently, an alumnus donated funds to transform the building once again—this time into a mathematics center. The architect inserted an abstract and Modern interior into the building's Gothic envelope. Private offices are located around the perimeter walls, while oversize corridors contain blackboards, tables, and seating to encourage socializing. A new, four-story atrium, topped by skylights, draws light down through the building's heart.



"This is a bold insertion into the structural frame of a Collegiate Gothic building."









Only one fabric

GIVES HOMEOWNERS

the greatest comfort with

YOUR AMENITIES PACKAGE.

lo one can claim greater durability, beauty and reliability than Sunbrella® brand fabrics. Over 40 years ago, we pioneered beautiful performance fabric, leading the way making outdoor living the incredible trend it is today. In addition, we offer the best limited warranty in the business, which will make omeowners especially comfortable in selecting Sunbrella. So find out how you can create a unique complement to your outdoor room esigns. Ask your local awning fabricator about Sunbrella or call Glen Raven Custom Fabrics Customer Service at 336-221-2211.

sunbrella®

NBRELLA® is a registered trademark of Glen Raven, Inc.
e Montreux Furniture Collection courtesy of Tropitone,™ Inc. Installation by Custom Canvas Structures, Tampa, FL.

www.sunbrella.com

CIRCLE 93 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

10. Boys Club of Sioux City
Sioux City, Iowa
Architect: *Randy Brown Architects [RECORD, December 1997, page 60]*

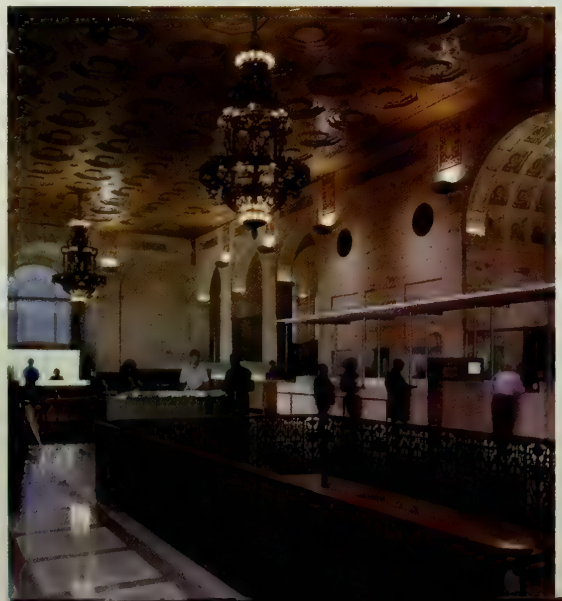
The Boys Club wanted to freshen the look of its building, a former armory that it has occupied since the 1950s; boys who use the club for recreation wanted "cool stuff." Most interior walls were left unchanged, but floors and ceilings were stripped to reveal original wood and plaster finishes. The architect added a new palette of tile, plywood, and chain link. Structural elements were revealed and treated sculpturally to create "jungle gyms for the mind and body."

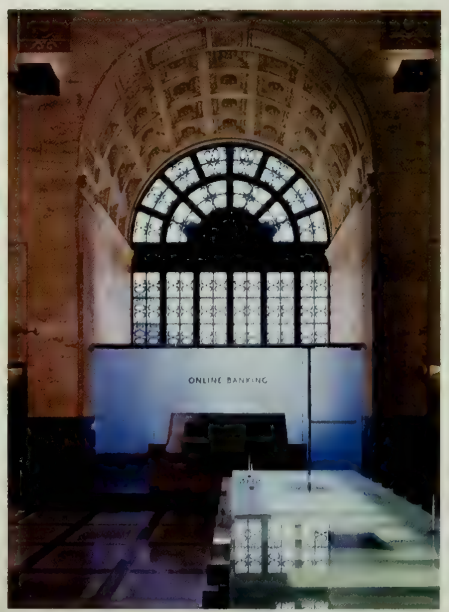




"It's a very tactile building; it says, 'touch, climb, swing, fall.' "

"The new work has equal integrity to the original building—it's extraordinarily refined."





11. Hyde Park Bank
Chicago
Architect: *Florian Architects [RECORD, March 2005, page 136]*

Over the years since the building opened in 1929, Hyde Park Bank's main hall was partitioned into smaller spaces, defined by dark, banal materials that obscured its rich original finishes. The restoration architect removed this clutter and returned the banking hall to its former grandeur. In defining new volumes, it inserted sleek contemporary fixtures forged from translucent and light materials that complement the original Classical aesthetic. A new teller counter, for instance, is composed of travertine and glass.

Sto Guard®

Introducing the Spray-On Building Wrap.



Dual Function: Waterproof and continuous air barrier assembly but NOT a vapor barrier, it is breathable

Superior: Waterproofing NOT "weatherization," water testing measured in days, NOT hours like most wraps

Ask about our 5 year warranty.

Seamless: Assembly covers full wall, joints and penetrations for use beneath exterior wall claddings including brick, wood, vinyl, cement siding, EIFS & stucco

Easy Application: It is water-based, so conventional spray equipment or paint rollers can be used

Pros in the know use Sto.

Call us with the specs on your next project at 888-410-0956 or go to www.stocorp.com/stoguard for testimonials or to locate the distributor nearest you.



sto

www.stocorp.com

CIRCLE 94 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

URBAN DESIGN



"Provides open space rather than barricading public space."

1. Battery Park City Streetscapes
New York City
Architect: *Rogers Marvel Architects*

A proliferation of Jersey barriers installed after September 11, 2001, continue to make parts of Battery Park City, to the west of the World Trade Center site, feel like a war zone. This plan will reclaim pedestrian areas by replacing the barriers with concealed traps that will prevent explosive-laden vehicles from getting too close to buildings.



2. Cady's Alley
Washington, D.C.
Architects: *Sorg and Associates; Frank Schlesinger Associates; McInturff Architects; Martinez & Johnson Architecture; Shalom Baranes Associates Architects; The Fitch Studio (landscape)*

In the heart of Georgetown, 18 small warehouses sat vacant along Cady's Alley, which runs parallel to the main commercial corridor of M Street. The architects redeveloped these buildings for retail and residential use. They also inserted two midblock connections to M Street and reinvigorated the alley for pedestrians.

"A sensitive intervention which breathes life into a historically significant urban fabric."





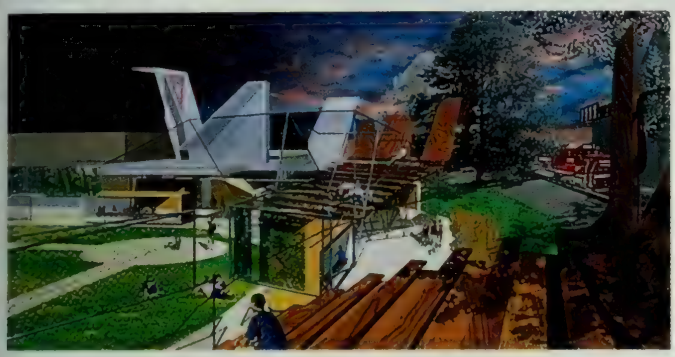
3. City of Santa Cruz Accessory Dwelling Unit Program
Santa Cruz, Calif.
Architect: *RACESTUDIOS*

Facing a land shortage and ongoing growth pressure, Santa Cruz, California, formulated the ultimate plan for urban infill. It provides homeowners with blueprints for prototype homes that can be constructed in backyards or above existing garages—accessory dwelling units that increase neighborhood density in an almost invisible way.

"An innovative way to increase density while maintaining the scale of the neighborhood."

4. Riparian Meadows, Mounds and Rooms: Urban Greenway for Warren, Arkansas
Warren, Ark.
Architect: *University of Arkansas Community Design Center*

This project combines ecological restoration with the creation of recreation spaces for a depressed, rural community of 6,500 people. By removing man-made barriers along the Town Branch Creek, engineers will restore the river's natural flood plain, allowing storm water to dissipate safely and creating open space for waterside parks.





"Combines community assets with the natural environment."



"There's great promise of revitalizing the Anacostia neighborhood."

5. Anacostia Waterfront Initiative Framework Plan
Washington, D.C.
Architect: *Chan Krieger & Associates*

Left off tourist maps and ignored even by locals, the Anacostia is the District of Columbia's forgotten river. The Anacostia Waterfront Initiative Framework Plan seeks to change this. Goals include cleaning up industrial pollution, increasing access to 20 miles of waterfront, and encouraging residential and commercial development in economically depressed neighborhoods nearby.



alcoaarchitecturalproducts.com

ALCOA



Titanic Toughness.

Just one of the many strengths of Alcoa Architectural Products' Reynobond® Titanium.

Want the natural durability and aesthetics of titanium, with all the design flexibility of a composite? Introducing Reynobond Titanium—the newest addition to our innovative line of Natural Metal Composites. Reynobond Titanium is the ideal solution for architectural projects that must demonstrate a sense of strength. Its natural, non-directional finish maintains itself over time, and can be post-production treated to achieve champagne hues that shift with light conditions. With so many benefits, it's a truly beautiful design choice.

Alcoa Architectural Products | build for life℠

For more information, contact Alcoa Architectural Products (800) 841-7774. Or visit us online at alcoaarchitecturalproducts.com.

©2005 Alcoa Architectural Products

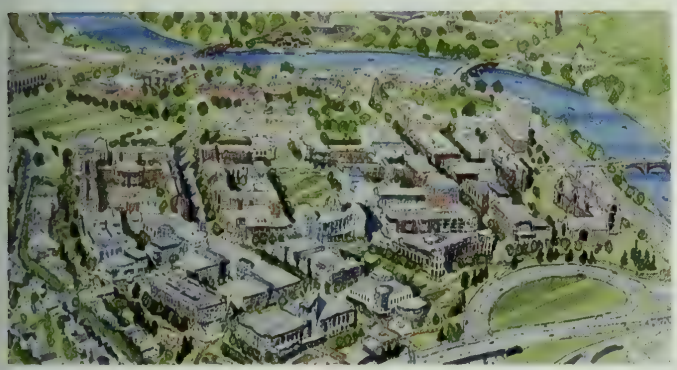
CIRCLE 95 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

6. Chongming Island Master Plan
Shanghai, China
Architect: *Skidmore, Owings & Merrill*

Chongming Island, to the north of Shanghai, China, is today largely rural—but it feels development pressure. This master plan will preserve 70 percent of the island for farming and a wildlife refuge. It also ensures that eight new cities and 40 villages will contain walkable neighborhoods accessible to public transportation.



"There is great clarity and integration between the ecological system and the development framework."



7. North Allston Strategic Framework for Planning
Boston
Architect: *Goody, Clancy & Associates*

Alarmed by Harvard University's land acquisitions in the suburb of North Allston, Massachusetts, Boston planners and residents decided to partner with the school to create a master plan that will minimize town and gown conflicts. It enables Harvard to grow, while preserving affordable housing and providing the community with new pedestrian-scaled commercial thoroughfares.

"There was a determination by all parties over time to reach a comprehensive plan."



8. Jackson Meadow, Marine on St. Croix
St. Croix, Minn.
Architect: *Salmela Architect and Coen + Partners*

Marine on St. Croix, the oldest settlement in Minnesota, resisted development pressure until well into the 1990s. The beauty of Jackson Meadow, aside from its prairie setting, is that it incorporates the region's vernacular architecture: Its smaller-scale homes and clusters of outbuildings, such as freestanding garages, look as though they grew up along with the village.



"Sensitive and respectful connections to the landscape and regional vernacular architecture."

CUTOFF

you're invited

EFCO Corporation
takes great pleasure in inviting you
to be our dinner guest
Thursday, May 19, 2005
Reception 6:00 p.m.
Followed by dinner

EFCO

WINDOWS
CURTAIN WALLS
ENTRANCES
STOREFRONTS

Please RSVP by May 12, 2005 to:
EFCO Corporation
800.221.4169 X 2654
aiarsvp@efcocorp.com

Details will be available at the EFCO Corporation booth (#3038) at the AIA 2005 National Convention and Design Exhibition - Mandalay Bay Convention Center, Las Vegas, Nevada.

Where windows are just the beginning.

EFCO

CIRCLE 96 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



"Bold buildings and bold spaces in tension with each other."

9. Northeastern University West Campus Master Plan
Boston
Architect: *William Rawn Associates, Architects*

As Northwestern University transforms itself from a commuter school to a residential one, it is developing more than 1.2 million square feet of new residence and academic halls. Its master plan ensures that these buildings will contribute to, not withdraw from, the school's urban setting.



10. West Harlem Waterfront Park
New York City
Architect: *W Architecture & Landscape Architecture*

Combining neighborhood rejuvenation with economic development, this project transforms a former parking lot and rail yard into a waterfront park. Additional goals include providing West Harlem with more transportation alternatives, including ferry service, and attracting businesses to the site to create local jobs for neighborhood residents.

"Gets Harlem to its river in a simple, direct, and elegant way."





11. Ramsey Town Center
Ramsey, Minn.
Architect: *Elness Swenson Graham Architects in collaboration with Close Landscape Architecture*

Located in the exurban Twin Cities, Ramsey Town Center is a mixed-use development consisting of 2,500 housing units, 1 million square feet of retail and office space, and civic buildings. Its master plan ensures that development will center around a transit hub, with a network of greenways linking neighborhoods on the 320-acre site.

"A very strong city-center plan."

CUTOFF



Louis I. Kahn's gentle masterpiece

Some 31 years after his death, Louis I. Kahn still holds our fascination. The recent documentary film about him, *My Architect*, was a great success, and his work continues to net awards. The Yale Center for British Art, Kahn's last major commission, begun in 1973 and finished by the architects Pellecchia and Meyers in 1977, is this year's AIA 25 Year Award winner. It is the fifth Kahn building recognized with the honor. This might appear excessive to some observers, but as one AIA juror remarked, "If only there were more Kahn buildings to award."

Kahn's works seem destined for an award slated for buildings that stand the test of time. Most of his designs were inspired by the bold scale and timeless geometry of ancient monuments, such as the Egyptian pyramids. Although the Center for British Art is a more intimate creation—and its exterior cladding of matte steel and glass deviates from Kahn's signature use of earthy materials such as brick and concrete—his aesthetic is unmistakable in the interior finishes, such as the glowing, honey-colored oak wall panels and travertine floors.

What truly defines the Center for British Art—a characteristic it shares with all of Kahn's buildings—is the way in which natural light fills virtually every space: flooding down from skylights, suffusing two interior courtyards, and filtering through the glass facade. Amy Meyers, the center's director, says that the layout of its circulation spaces and galleries is also symbolic. "The design is about the process of enlightenment; it lets you read the building in relation to the art," she observes. "It's a rational building. Nothing is mysterious." This might seen as an ironic statement, given the secrecy surrounding Kahn's personal life, but the enduring genius of his buildings is that they are nothing if not direct. *James Murdock*



CUTOFF





"The materiality and the language of the wood framed in stainless steel, concrete, and natural linens is still a delight for the eyes."







Winners and Jurors 2005

WINNERS

Architecture (page 116)

Contemporaine at 516 North Wells: *Perkins+Will;* **Agosta House:** *Patkau Architects;* **Conservatory of Flowers:** *Architectural Resources Group in collaboration with Tennebaum-Manheim Engineers;* **Emerson Sauna:** *Salmela Architect;* **Somis Hay Barn at the Lucky Dog Ranch:** *SPF:a;* **Hill Auditorium:** *Quinn Evans/Architects (restoration architect); Albert Kahn Associates (architect of record);* **Seattle Central Library:** *OMA/LMN—A Joint Venture;* **Gannett/USA Today Corporate Headquarters:** *Kohn Pedersen Fox Associates;* **Jubilee Church:** *Richard Meier & Partners Architects;* **Shaw House:** *Patkau Architects;* **Mill City Museum:** *Meyer Scherer & Rockcastle;* **Holy Rosary Catholic Church Complex:** *Trahan Architects;* **Mountain Tree House:** *Mack Scogin Merrill Elam Architects*

Interiors (page 130)

Paul and Lulu Hilliard University Art Museum: *Eskew+Dumez+Ripple;* **I.a.Eyeworks Showroom:** *Neil M. Denari Architects;* **Jigsaw:** *Pugh+Scarpa Architects;* **AM International:** *Elliott + Associates Architects;* **Elie Tahari Fashion Design Office and Warehouse:** *Voorsanger Architects;* **Chanel, rue Cambon:** *Peter Marino + Associates Architects; Vigneron Architects (associate architect);* **East End Temple:** *BKSK Architects;* **Pavilion in the Sky:** *Peter Marino + Associates Architects;* **James Stewart Centre for Mathematics:** *Kuwabara Payne McKenna Blumberg Architects;* **Boys Club of Sioux City:** *Randy Brown Architects;* **Hyde Park Bank:** *Florian Architects*

Urban Design (page 146)

Battery Park City Streetscapes: *Rogers Marvel Architects;* **Cady's Alley:** *Sorg and Associates; Frank Schlesinger Associates; McInturff Architects; Martinez & Johnson Architecture; Shalom Baranes Associates Architects; The Fitch Studio (landscape);* **City of Santa Cruz Accessory Dwelling Unit Program:** *RACESTUDIOS;* **Riparian Meadows, Mounds and Rooms: Urban Greenway for Warren, Arkansas:** *University of Arkansas Community Design Center;* **Anacostia Waterfront Initiative Framework Plan:** *Chan Krieger & Associates;* **Chongming Island Master Plan:** *Skidmore, Owings & Merrill;* **North Allston Strategic Framework for Planning:** *Goody, Clancy & Associates;* **Jackson Meadow, Marine on St. Croix:** *Salmela Architect and Coen + Partners;* **Northeastern University West Campus Master Plan:** *William Rawn Associates, Architects;* **West Harlem Waterfront Park:** *W Architecture & Landscape Architecture;* **Ramsey Town Center:** *Elness Swenson Graham Architects in collaboration with Close Landscape Architecture*

25 Year Award (page 152)

The Yale Center for British Art: *Louis I. Kahn*

Firm of the Year (page 156)

Murphy/Jahn: *Helmut Jahn, John Durbrow*

Gold Medal (page 162)

Santiago Calatrava, FAIA



Architecture

Jury Chair

Thomas W. Ventulett III*, FAIA*

Since opening in 1968, Thompson, Ventulett, Stainback & Associates has been honored with more than 200 design awards, including the AIA Architecture Firm Award in 2002. A founding principal, Tom Ventulett now serves as chairman emeritus of its board of directors and as its design quality assurance director. He is a frequent lecturer at universities and professional organizations nationwide.

Frank Harmon*, FAIA, Raleigh, N.C.;* ***Amira Joelson****, Assoc. AIA, New York City;* ***Brenda A. Levin****, FAIA, Los Angeles;* ***Thomas Phifer****, AIA, New York City;* ***Joseph M Valerio****, FAIA, Chicago;* ***Susan Lipka****, Houston;* ***Danielle S. Wilkins****, Springfield, Va.;* ***Vivian Loftness****, FAIA, Pittsburgh*



Interior Architecture

Jury Chair

Mark McInturff*, FAIA*

McInturff Architects was the recipient of several AIA Honor Awards, including one for urban design this year. A principal of the Bethesda-based firm, Mark McInturff has taught at the University of Maryland School of Architecture since 1980, where he was appointed Kea Professor for spring 2003. Since 1995, he has been a visiting critic at the Catholic University of America's School of Architecture and Planning.

Judith DiMaio*, AIA, Old Westbury, N.Y.;* ***Karen I. Fiene****, AIA, Berkeley;* ***Douglas A. Garofalo, FAIA****, Chicago;* ***Nancy Tessman****, Salt Lake City*



Regional and Urban Design

Jury Chair

Michael E. Willis*, FAIA*

Michael Willis is president and founding principal of Michael Willis Architects, an architecture, urban design, and interiors firm with offices in San Francisco and Oakland, in California, and Portland, Oregon. He remains involved in AIA San Francisco, serving as president in 1995, and is former chair of the National Organization of Minority Architects of Northern California.

John C. Guenther*, AIA, St. Louis;* ***Stephen L. Quick****, AIA, Pittsburgh;* ***Karen Van Lengen****, AIA, Charlottesville, Va.*

The best roof money can buy.



Follansbee®

TCS II® Terne-Coated Stainless

Boca Grande, the home above, and its Follansbee roof were directly in the path of Hurricane Charley. The storm had given way to a week of clear blue Florida skies, so we thought it was about time to call our customer. "Everybody okay?" "Yes, we were up North at the time. But a couple of our neighbors got hit pretty hard." "How's the roof?" "Perfect. Like the day it was installed. No damage, no leaks." So we talked about golf and fishing instead.

Follansbee – for those who demand the very best.

Call or visit Follansbee online today to learn more.

800.624.6906 follansbeeroofing.com



CIRCLE 97 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



AIA honors the futuristic vision and high energy of Murphy/Jahn

By Cheryl Kent

According to Chicago folklore, Mayor Richard J. Daley (father of the current mayor) called architect Charles F. Murphy in 1967 while McCormick Place was still burning. "Charlie" the mayor said, "start drawing." Murphy's firm—then known as C.F. Murphy and now Murphy/Jahn (M/J)—did get the commission to rebuild the convention center. Gene Summers was hired to design the project, and he brought along his 27-year-old assistant, Helmut Jahn.

Murphy/Jahn was named Firm of the Year by the AIA for 2005. In two years, the office will celebrate its 70th anniversary. Since 1982, it has been under the sole proprietorship and determined leadership of Helmut Jahn.

The firm's roots in Chicago are deep (Charles Murphy worked in Daniel Burnham's office during the last year of his life), and it has contributed significant work to Chicago, providing it with some of the tough, muscular buildings for which the city is justly famous. To name two, there is McCormick Place (1970), with its massive, 19-acre roof and unique support structure; and the 1965 Richard J. Daley Center, with its 87-foot-long bays. The office continued to be the mayor's favorite and win plum jobs from the city, among them O'Hare Airport. In those days, M/J gave Skidmore, Owings & Merrill's Chicago office a run for its money even as it constructed the 100-story John Hancock Tower.

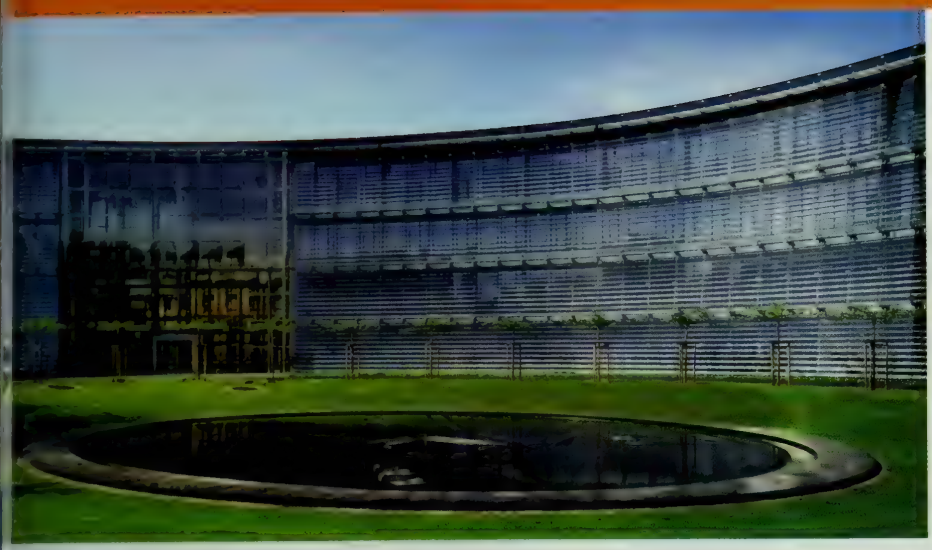
As Murphy/Jahn, the office's reach is global: In addition to the U.S., it designs projects in Europe, Asia, and Africa. The firm's work is as technically audacious as ever—although the emphasis is no longer on steel and breathtaking spans—and the architectural expression has evolved, becoming more refined in the past decade, characterized by sculptural massing and delicate glass skins. Perhaps only Jean Nouvel matches M/J's skillful and effective use of glass.

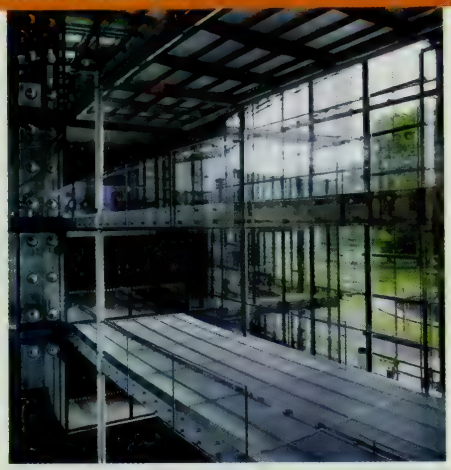
Since 2000, beginning with the Sony Center, M/J has been collaborating regularly with engineer Werner Sobek and climate designer Mathias Schuler. Jahn and Sobek have coined

Cheryl Kent's book on Santiago Calatrava's Milwaukee Art Museum is being published in June by Rizzoli. Her book on David Hovey's work was published in 2004.

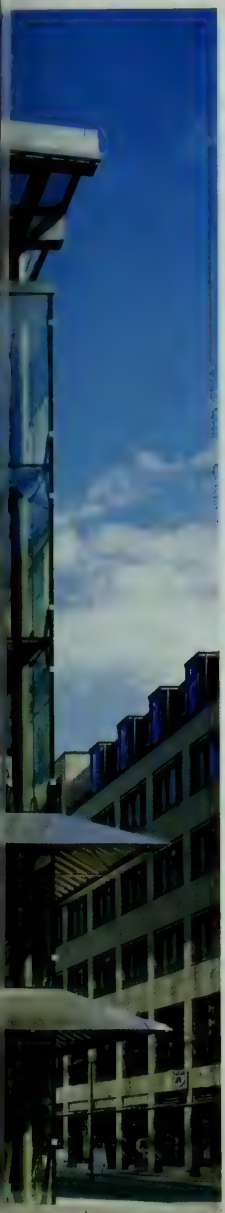


PHOTOGRAPHY: COURTESY MURPHY/JAHN (TOP LEFT); © ROLAND HALBE (1, 2)





1. Bayer AG Konzemzentrale, Leverkusen, Germany: exterior view (left); circulation corridor (above).





2. Kaufhof Galeria, Chemnitz, Germany: transparent facade of showroom (left); bus-station loggia (above).

a new term, *Archi-Neering*, to express the equality of their collaborative working relationship, and they released a book on the subject. "In the office," Jahn says, "no one can tell me I had a bad idea. But Werner can tell me I had a bad idea."

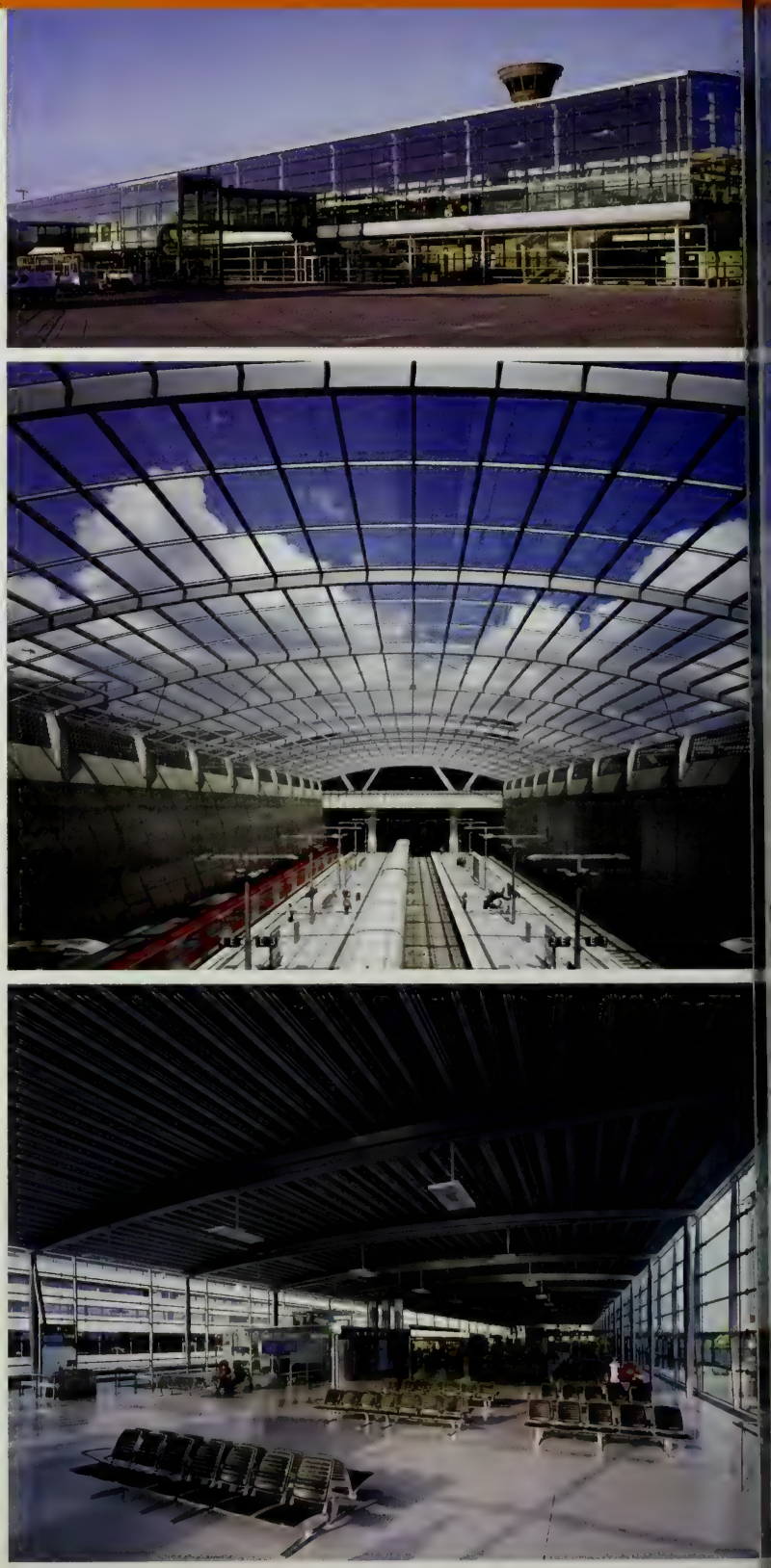
The collaboration has given recent work a seamless quality. With higher energy-performance standards in Europe, M/J has designed large-scale, innovative buildings using natural ventilation as the primary system. While mechanical backups assist in extreme conditions, the elimination of conventional HVAC supports has simplified design.

Murphy/Jahn followed a logical path to its present work. During the 1970s and 1980s, the firm sought to expand architecture through technology and new materials. Its speculative office buildings of that period suffered the gaudy veneers of thin polished stone and coy historical references that everyone's did. There are the flamboyant projects like the Thompson Center in Chicago that won Jahn the name "Flash Gordon." (Defiantly, Jahn embraced the name, adopting it for his racing sailboat.) But in smaller commissions, such as the Rust-Oleum Headquarters (1978) and the Xerox Center (1980), Murphy/Jahn produced modest gems demonstrating an honest search for a path from doctrinaire Modernism to a meaningful contemporary architecture. These projects show the firm was never in danger of dead-ending on historicism nor floundering in abstract literary philosophy.

Starting his career among Chicago's titans, Jahn learned to think big. In an interview several years ago, he said pointedly, "I've designed one house in my life," and that was a gift for Murphy, who was retiring. Jahn—a man of formidable intelligence and drive—looks pragmatically at every job to push the solution past convention. In America, he celebrates the efficiency and economy with which buildings are constructed, as in the IIT Student Housing, Chicago (2003); in Europe, he revels in the freedom to experiment and the higher standards for energy saving, as in the Post Tower, Bonn, Germany (2003).

Murphy/Jahn has been an architecture boot camp for young architects, where they are worked hard and where some discover their own grit and design talent. The list of distinguished architects who worked at M/J attest to the firm's eye for talent and an ability to cultivate—albeit with very tough love—the gifted. The list of alumni includes Tom Beeby, Jacques Brownson, John Burgee, David Hovey, and Ron Krueck, among others.

The firm has been controversial, and receiving the AIA Firm of the Year Award does not acknowledge a new willingness to compromise on Murphy/Jahn's part. As evidence, one need only look to the Sony Center, Berlin (2000), the central court of which recalls the Thompson Building in Chicago—the most controversial building Jahn ever designed. Instead of repudiating the work that caused the firm its biggest headache, Murphy/Jahn has instead returned to its theme. This time, the expression is refined while retaining the original's exuberance. Sony does not feel over-the-top, as the Thompson Center does. It is this control—call it maturity—combined with an enduring appetite for experimentation that characterizes the firm's current work. ■



3. Cologne/Bonn Airport, Cologne/Bonn, Germany: concourse (top); glass roof covering train station (middle); interior concourse (bottom).



4. Highlight Munich Business Towers, Munich, Germany: dual towers with skybridges (above).

5. Post Tower, Bonn, Germany: shingled-wall facade (below).





6. State Street Village, IIT, Chicago: the building in context (left).

glas**trösch**



The Houston Texans' stadium uses **LUXAR® Anti-Reflective-Glass** for the corporate lounges.

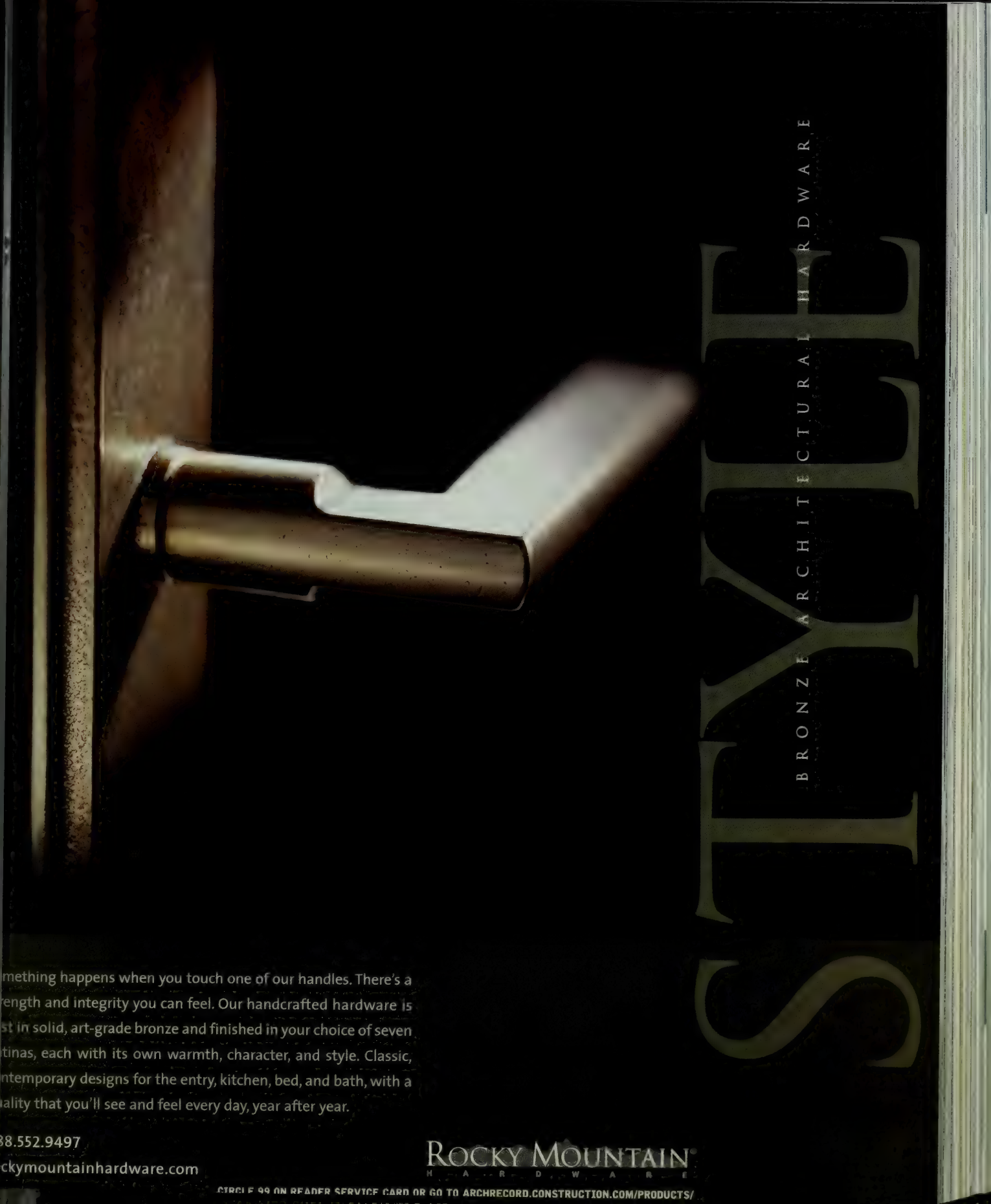
AIA Booth #3675

IGT Glass
10680 East Desert Cove
Scottsdale, Arizona 85259
Phone 480-767-8220
Fax 480-767-8267
E-mail IGTGlass@aol.com

Glas Trösch AG
HY-TECH-GLASS
Industriestrasse 12
CH-4922 Bützberg

Phone +41 (0)62 958 54 00
Fax +41 (0)62 958 53 94
hytechglass@glastroesch.ch
www.glastroesch.ch
www.luxar.ch

CIRCLE 98 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



mething happens when you touch one of our handles. There's a
rength and integrity you can feel. Our handcrafted hardware is
st in solid, art-grade bronze and finished in your choice of seven
tinas, each with its own warmth, character, and style. Classic,
ntemporary designs for the entry, kitchen, bed, and bath, with a
uality that you'll see and feel every day, year after year.

88.552.9497
ckymountainhardware.com

ROCKY MOUNTAIN HARDWARE

CIRCLE 99 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Calatrava Wins the Gold

After Santiago Calatrava, FAIA, was handed the 2005 AIA Gold Medal in Washington, D.C., this February, he revealed in his speech the deep, even spiritual, passion for building that has helped him create one of the most notable bodies of work in contemporary architecture. A builder, he quoted from a biblical text, "must carry out a spirit beyond human capability." Calatrava himself is the embodiment of such a worker, creating forms possessing a soulful, even heroic character, larger than life. His sculptural works simultaneously display sensual, ambitious, and poetic qualities. We feel as if we've seen his structures in our imagination and in our aspirations, but never before in reality; and it is his unyielding spirit, frozen in form, that profoundly moves ours. *Sam Lubell*

Portrait by Nathan Beck Photography

By Alexander Tzonis

Less than a generation ago, the split between construction technology and cultural expression in architecture appeared to be irreversible. With the exception of a few "high-tech" buildings, mostly of limited appeal to the broader public, the humanistic unity of art and science in design looked as if it was irrevocably lost. It is remarkable how fast and unexpectedly the situation has changed. Many factors and people played a role in this reversal; without a doubt, one of the most significant contributors was Santiago Calatrava.

Calatrava's buildings, engineering projects, and furniture taken together with his drawings, sculpture, and scientific research, manifested that a genuine unity of rational intelligence with poetry is still possible; a very rare synthesis in our time. His built projects succeeded in overcoming the barriers between pragmatism, infrastructure service, and intellectual expression. They restored a general enthusiasm for the art of construction, bringing back an excitement about it long gone since the 1950s. They dispelled the bias against technology as something by definition dull. Most important, they demonstrated that utilitarian artifacts do not have to be oppressive and disruptive but can evoke delight and a sense of identity.

At first glance, Calatrava's designs look complicated and perplexing. The complexity of their configuration and the "strangeness" of their shape are born out of a commitment to facing hard design problems without compromise, without conforming to the beaten track of reductive solutions. As the Stadelhofen Railway Station in Zurich (1983–90) shows, his structures operate on two levels. On a first level, they are intelligent technological solutions to programmatic functional demands. As a result, the kernel of the form of his projects appears direct and plain. Yet on a second level, they go beyond the limited and static problem-solving kind of design. They meet head-on economic, technological, environmental, social, and cultural challenges, acquiring intricate and rich forms.

The commitment to targets beyond narrow problem-solving objectives accounts for the primacy given to motion and movement in Calatrava's projects, and as a result their manifest dynamic spatial organization. In the Milwaukee Art Museum (2001), for example, key structures contain mobile parts and articulate streamline-shaped conduits to accommodate systems of circulation. But they also imply movement appearing to have been designed to the "critical point": in engineering, the state beyond which, if a certain variable in a structure is exceeded, the interatomic bonds of its body will be broken and the structure will fly in all directions at once. Yet, there are more profound cultural, epistemological, and moral reasons explaining the perplexity raised by Calatrava's structures. In aesthetic terms, the idea of the "critical point" is translated into the idea of the "pregnant moment," the figure that represents through its form both past and future states of a body. We can see that clearly in most of his bridges: in the bent arch of the Volantin Footbridge in Bilbao (1990–97) or the leaning pylon of the Alamillo (1987–92) or the Light Rail Train Bridge in Jerusalem (begun in 2002). In other words, the structure appears to capture the moment as if falling, but it is not; it seems to be rising, but it is not. Almost all of Calatrava's projects combine into one figure these two apparently contradictory states of a structure, leaning on the brink of imminent collapse and on the verge of standing up.

After having gone to so much effort to reach the satisfactory technological ends to make the structure optimally lasting and durable, Calatrava appears to enjoy and exploit, like an acrobat or a dancer, this state of suspense. One can also claim that he wants the user of his works equally to enjoy it. The question is how, and perhaps more important why, so many people experience the same enjoyment. The answer seems to be that Calatrava in these dynamic structures constructs a metaphor that alerts us that optimal technological solutions are necessary. The sense of perplexity and wonder embedded in his designs has to do with the very human creative yearning for remaking one's life, for repairing wrong: the never-ending search for a meaning and a definition of the good life.

It is these principles that make Calatrava's structures so appealing and so uniquely engaging, that give them coherence and rigor at all scales, from their general configuration to their individual details. A series of five new bridges over the Trinity River and future lakes in Dallas, Texas (1998), and a group of three bridges over the Hoofdvaart in Haarlemmermeer, the Netherlands (1999–2004), demonstrate that it is these principles that account for the felicitous fit of the new structures into the landscape, the excitement they generate, despite the fact that they stand conspicuously in full view. Similarly, within historic urban settings, Calatrava's projects do not simulate forms of the past, nor do they hide or sink. Yet they do not offend, as one can see in his Lusitania Bridge (1988–91) in Spain standing next to a famous Roman bridge. In their cutting-edge technology and strangeness of appearance, these structures make their users or viewers reengage with the present while honoring the past. Finally, situated in socially challenging areas like Ground Zero, neighborhoods undergoing economic decline, or obsolescent industrial sites, Calatrava's works do not disrupt existing human ties, as most architectural interventions have since the 1960s. Without the rhetoric or demagogy of populism, they bring hope.

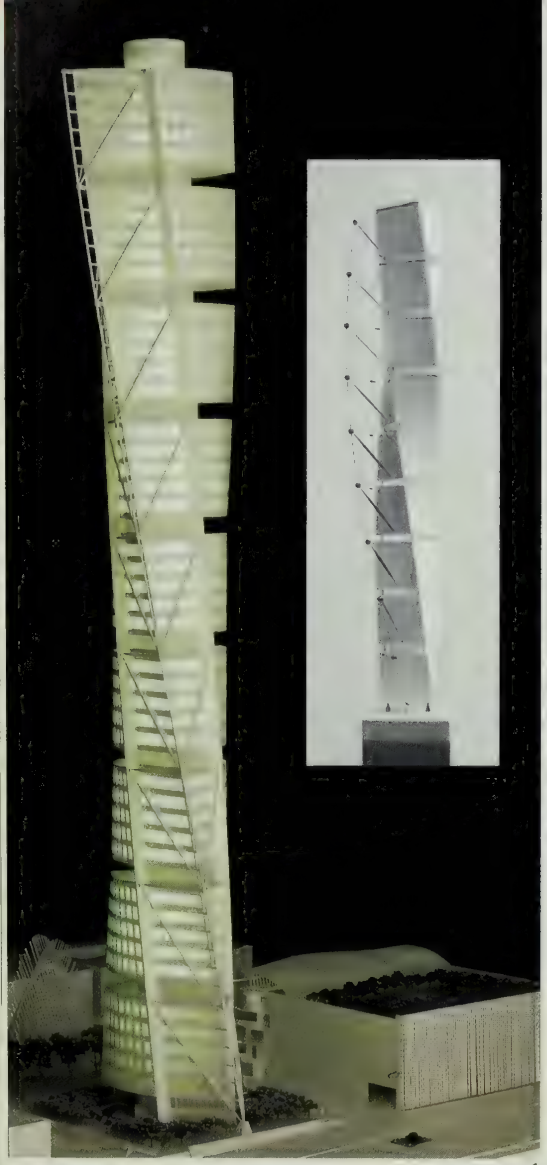
To be effective, the poetics of movement requires rigor and control; and to operate on the two levels mentioned above demands knowledge that participates in multiple domains. This cornucopia of knowledge was accumulated by Calatrava through continuous, intense "patient research," as Le Corbusier once said. He studied at an arts and crafts academy in Valencia, at the Ecole des Beaux Arts in Paris, at the Escuela Técnica Superior de Arquitectura in Valencia, and at the Swiss Federal Institute of Technology in Zurich, in addition to countless years of self-instruction on vernacular and international architecture. The subsequent method Calatrava has chosen for much of his research over the years has been envisioning possible schemes within existing precedents rather than counting and computation; and the technique to carry this out was sketching. The precedents Calatrava used to recruit by analogy and drawing were flying birds, bulls, and in particular, the human body, all having structural similarities with the new artifacts to be conceived. Calatrava produced an endless series of sketches of real-life objects offering a variety of configurations filling up an endless series of notebooks. All humans are endowed with these two contradictory, yet complementary intelligences: analysis and analogy. Few cultivate them to develop their complementary potential further. Calatrava did. In this respect, as mentioned in the beginning, Calatrava succeeded not only in delivering good architecture, but also in changing the way people think about architecture, bringing science and technology closer to art. Perhaps less known is that, reciprocally, he is also influencing engineering, bringing design—thinking through vision and envisioning—back to technology.

Perhaps where Calatrava exerted the most important influence and where his impact will be more decisive is with the generation of architects to come and their attitude toward technology. Clearly, Calatrava's spirit of experimentation combined with genuine enthusiasm, but also solid realism, has helped dispel a climate of indifference if not suspicion for things technical that was building up in a large number of academic institutions for the past three decades. ■

Alexander Tzonis, a professor at the University of Delft, is the author of several books about Santiago Calatrava's work.



Cittern Bridge,
Haarlemmermeer,
the Netherlands, 2004.
[RECORD, November
2004, page 156]



1. Turning Torso, Malmo, Sweden, 2005 (estimated completion).

2. 80 South Street, New York, New York, 2006 or 2007 (estimated completion).



2

FUTURE PROJECTS

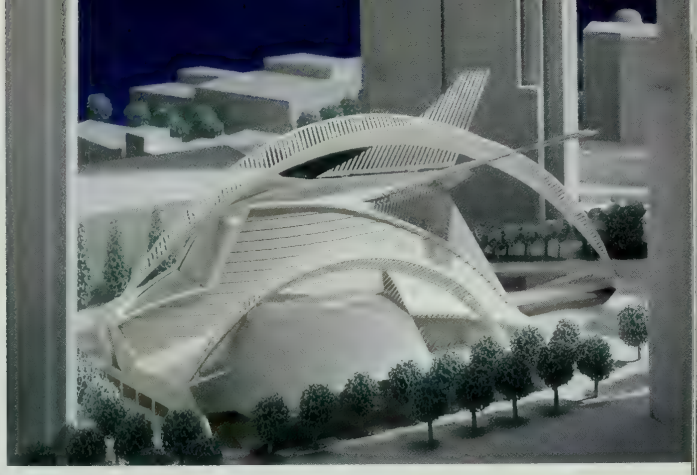
Over the years, much of Santiago Calatrava's work has been influenced by his experiments in sculpture, a field that has piqued his interest since childhood. Buildings like the Tenerife Opera (page 172, *5*) and bridges like the three over the Hoofdvaart in the Netherlands (page 165) echo his sculptures' tendency to embody movement, elasticity, and human and organic form. His newest works, though, experiment with concepts of weight and gravity, as if he had grown tired of the mundane constraints of the Earth. Technological advances and large budgets have helped further the ambitious character and scale of these projects.

Calatrava's current 80 South Street project, an 835-foot high-rise apartment building in Lower Manhattan (*2*) made up of 12 glazed cubes radiating around a central core, is an almost exact replica of a sculptural work that the architect displays in his Manhattan town house. His *Turning Torso* high-rise in Malmo, Sweden (*1*), a twisting form also radiating around a central axis, is based on a torquing, white Thassos marble and chrome-plated steel sculpture of 1991 called *Twisting Torso*. Three new towers in Valencia, Spain (*5*), the final pieces of his immense City of Science, further elaborate on the ability to twist materiality and challenge gravity. Named *Valencia*, *Castellón*, and *Alicante*, each building's glass, steel, and concrete form will twist upward on a central axis, taking on new shapes, such as spindles and even a drops of water, as they progress skyward.

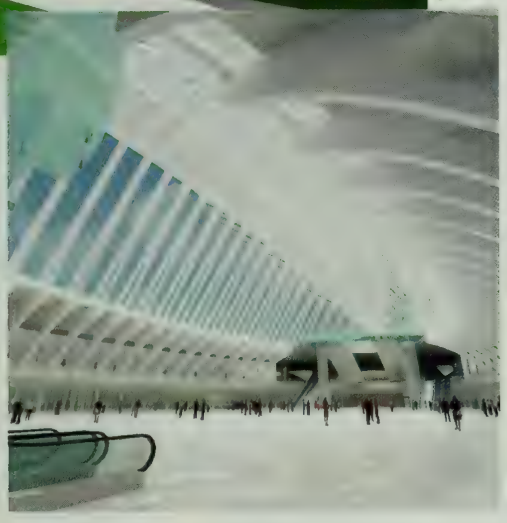
Meanwhile, ambitious new building scales carry Calatrava's free-form and kinetic sculpture to new realms. His Atlanta Symphony Center (*4*) will not only make room for 2,000 people, but its giant surrounding shells and fins will reach almost 200 feet in the air. One of the immense structure's primary goals will be to draw attention to itself, a goal expressed by the architect: "Architecture has this wonderful capacity to make a place unique. To become a symbol." Calatrava's kinetic World



3



4





5

3. World Trade Center Transit Hub, New York, New York, 2009 (estimated completion).

4. Atlanta Symphony Center, Atlanta, Georgia, 2008 (estimated completion).

5. Valencia Towers, Valencia, Spain, 2007 (estimated completion of first tower).

Trade Center Transit Hub (*3*), which will sit on the eastern edge of the Trade Center site within its own plaza, will cost $2 billion, contain more than 200,000 square feet of interior space, and help transport over a quarter of a million commuters a day. At street level, an ovular, wing-shaped, 168-foot-high movable glass-and-steel structure will greet visitors. Underground, the station will feature roughly 200,000 square feet of retail, open space, and train platforms. When finished, Calatrava's City of Sciences in Valencia (page 170, *2*), clearly related to human forms, will be one of the largest built projects in the history of Spain.

These are just a few of the busy architect's future projects. New bridges under way include striking forms over the Trinity River in Dallas, Texas; the Macken Street Bridge in Dublin, Ireland; the Serreria Bridge in Valencia, Spain; the Quarto Ponte in Venice, Italy; and, in Israel, a footbridge in Petah Tikvah and a light-rail train bridge in Jerusalem. More new buildings include a train station in Bologna, Italy; a photography museum in Doha, Qatar; a train station in Liège, France; and university buildings and a sports hall in Maastricht, the Netherlands.

"We all spend time trying to build a new vocabulary," says Calatrava, who notes a progression toward more simple sculptural forms over his career. "This research moves you into some of the most daring adventures of your life." He adds, "We work with material the same way an artist does, inventing along the way. I continue to add new dimensions to my work, because technically we are always able to do something new, and because it is always important to be responsive to our society."

So what's next? That, says Calatrava, is unclear, but he seems sure that it will not be a repeat of what we see now. "The most relevant fact is not where I am today, but the fact that my work is ongoing. You don't look backward; you see the next problem you want to solve." *S.L.*

1

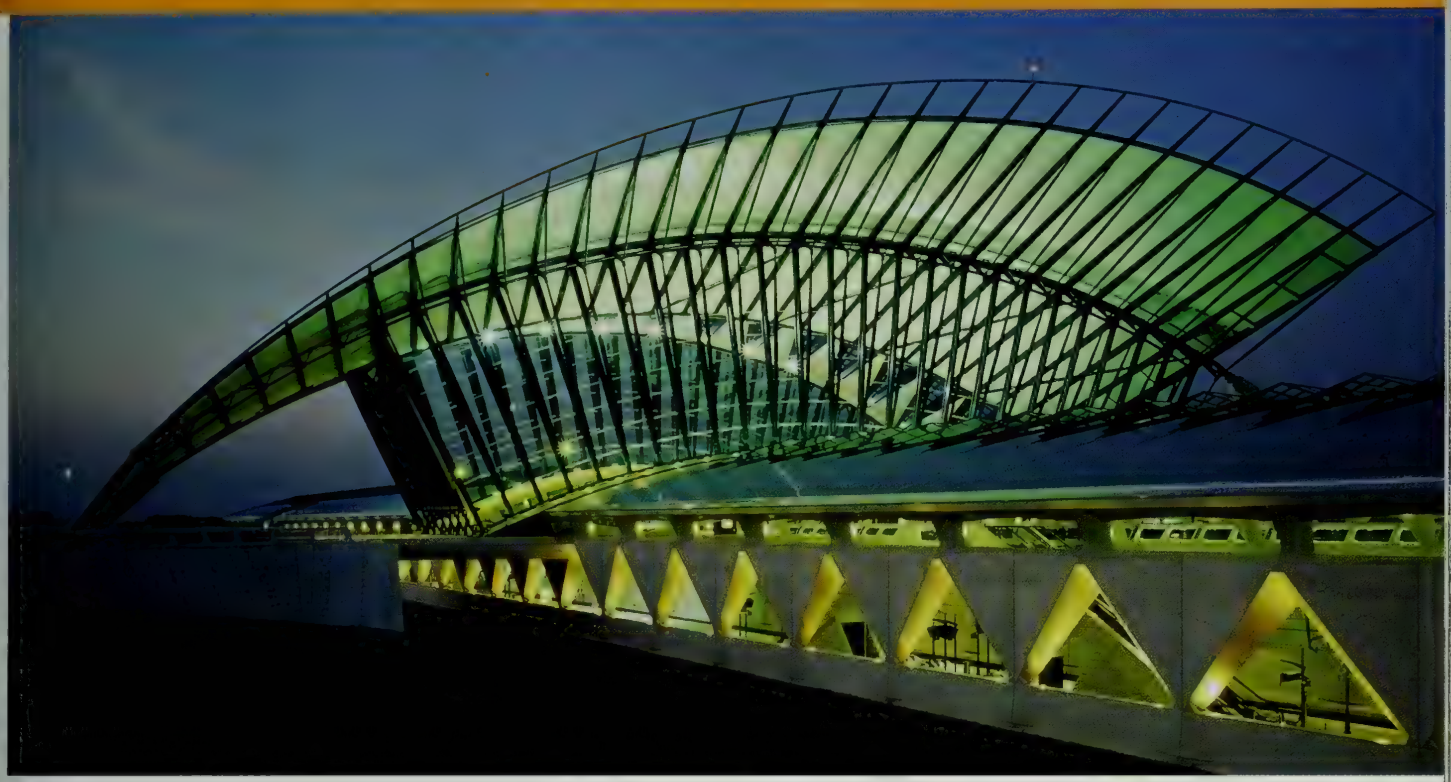




2

1. BCE Place, Toronto, Canada, 1992. [RECORD, February 1993, page 84]

2. Montjuic Telecommunications Tower, Barcelona, Spain, 1992. [RECORD, August 1992, page 102]

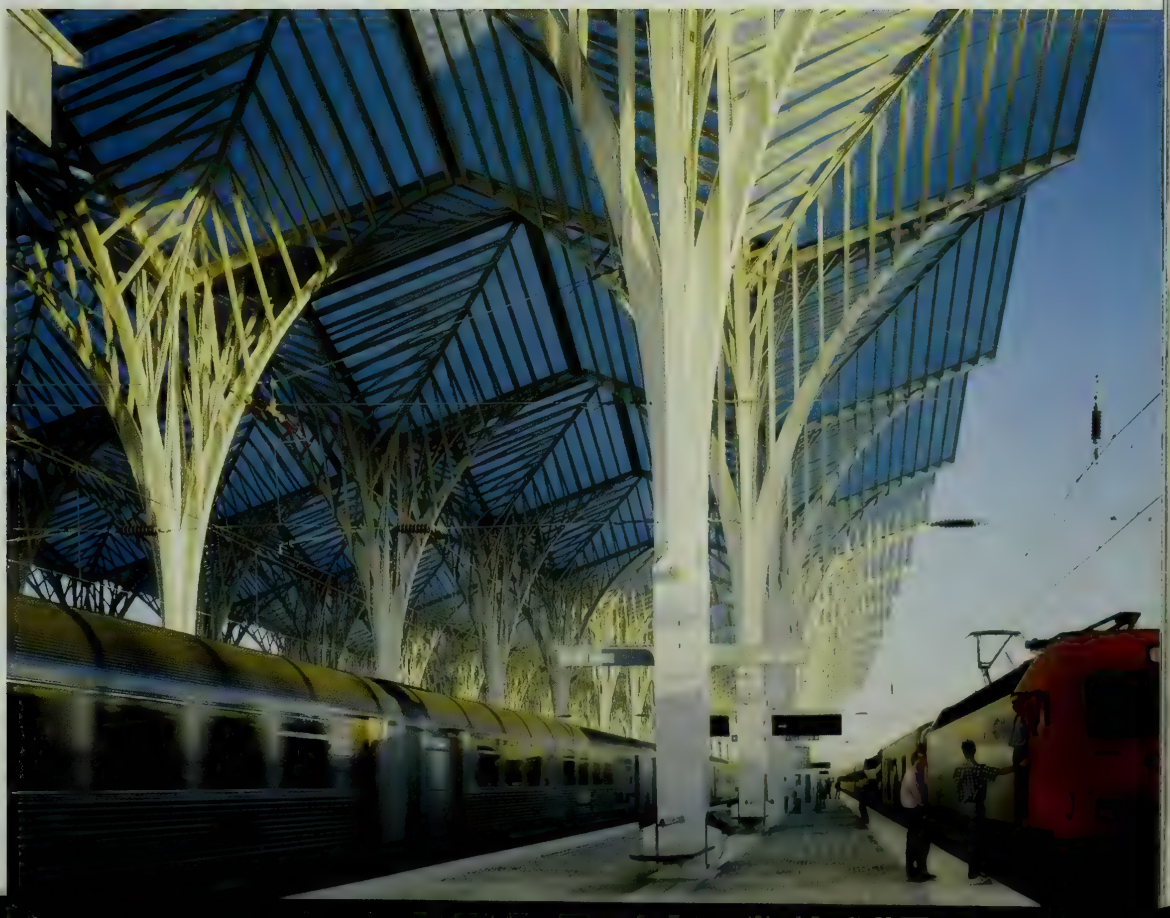


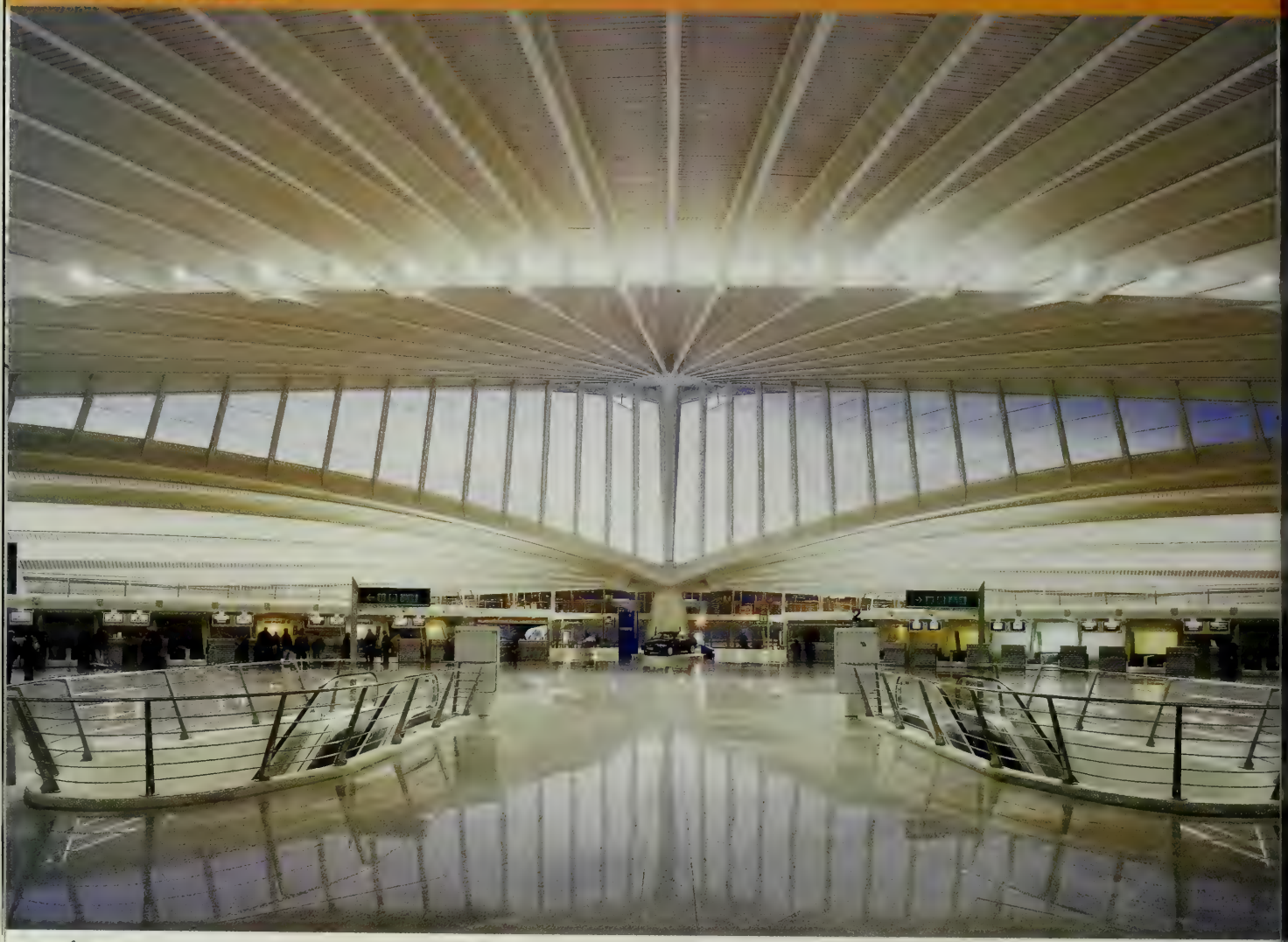
3

4

3. Lyon Airport Station, Satolas, France, 1994. [RECORD, July 2000, page 85]

4. Oriente Train Station, Lisbon, Portugal, 1998.





1

1. Sondica Airport, Bilbao, Spain, 2000. [RECORD, July 2000, page 83]

2. City of Arts and Sciences (science museum, planetarium, promenade, and parking structure), Valencia, Spain, 2000. [RECORD, July 2000, page 74]

2





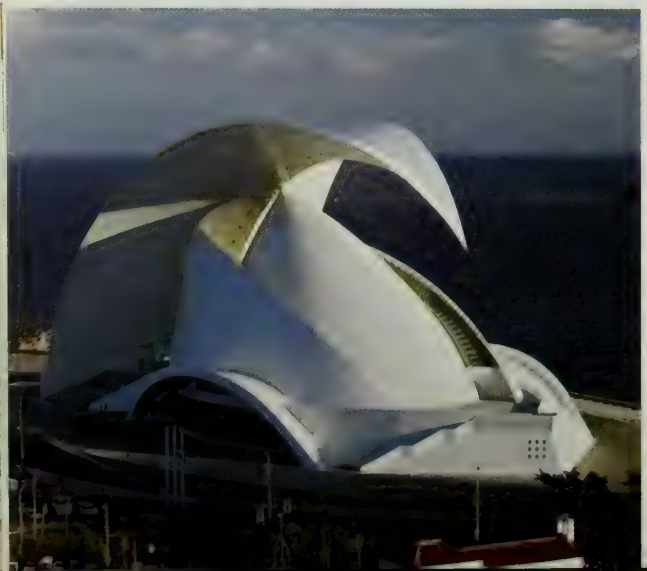
3



3. Milwaukee Art Museum expansion, Milwaukee, Wisconsin, 2001. [RECORD, March 2002, page 92]



4





5

4. Bodegas Ysios Winery, Laguardia, Spain, 2001. [RECORD, May 2003, page 242]

5. Tenerife Opera House, Santa Cruz, Tenerife, Canary Islands, Spain, 2003. [RECORD, February 2003, page 78]



6. Athens Olympic Sports Complex, Athens, Greece, 2004.



Scheherazade Travertine, New Mexico

A real slice *of* nature.

If natural stone was part of the produce family, they'd probably call it organic.

No chemicals. No additives. No laboratory-induced processing. Just the way nature created it millions of years ago.

Today, there's a new emphasis on the real thing, especially when it comes to the products we eat and the materials we use to build with.

Thanks to new sources of supply around the world and the sophisticated technology that gets it out of the ground and to the fabricator at less cost; beautiful, versatile, affordable natural stone is the natural choice in every phase of residential, institutional and commercial construction.

At the Marble Institute of America, we're dedicated to helping architects, designers and contractors to understand how they can effectively use nature's oldest building material in their projects now and in the future.

That's why we're offering our popular *Dimension Stone Design Manual VI*, acclaimed around the world, to architects at a special price of $99. Available in print or on CD.

To get your copy call MIA at 440-250-9222.

MARBLE INSTITUTE of America

www.marble-institute.com

CIRCLE 100 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



WE'VE CREATED AN INGENIOUS WAY TO JOIN PANELS AND PARTITIONS. NOT TO MENTION ARCHITECTS AND BUILDERS.



45-degree corner caps were used to connect Hy-Lite panels to form this neo-angle shower. Flat caps were used to finish off the top and sides of the doorway, while a flat cap and mounting channel were used to attach the panels to the curb and wall.

Aluminum accessories from Hy-Lite® make it easy for everybody to see eye to eye. That's because they make joining our prefabricated, ready-to-install panels, partitions and radius walls remarkably fast and easy. Panels and partitions can be joined at 45- and 90-degree angles, allowing builders and architects to specify Hy-Lite acrylic block systems in almost any conceivable configuration. Accessories are also available to connect angled walls, to seamlessly join panels, and to beautifully finish the ends of a panel or partitions. With aluminum accessories from Hy-Lite, discovering your imagination is easier than ever. To locate a supplier, call 1-877-712-4013 or visit us at www.hy-lite.com.

Hy-Lite® PRODUCTS, INC.

Discover your imagination.



Round caps finished off the ends of this radius wall perfectly. Aluminum mulls were used to connect the three radius walls together, while a flat cap mounted the units to the top of the curved wall.



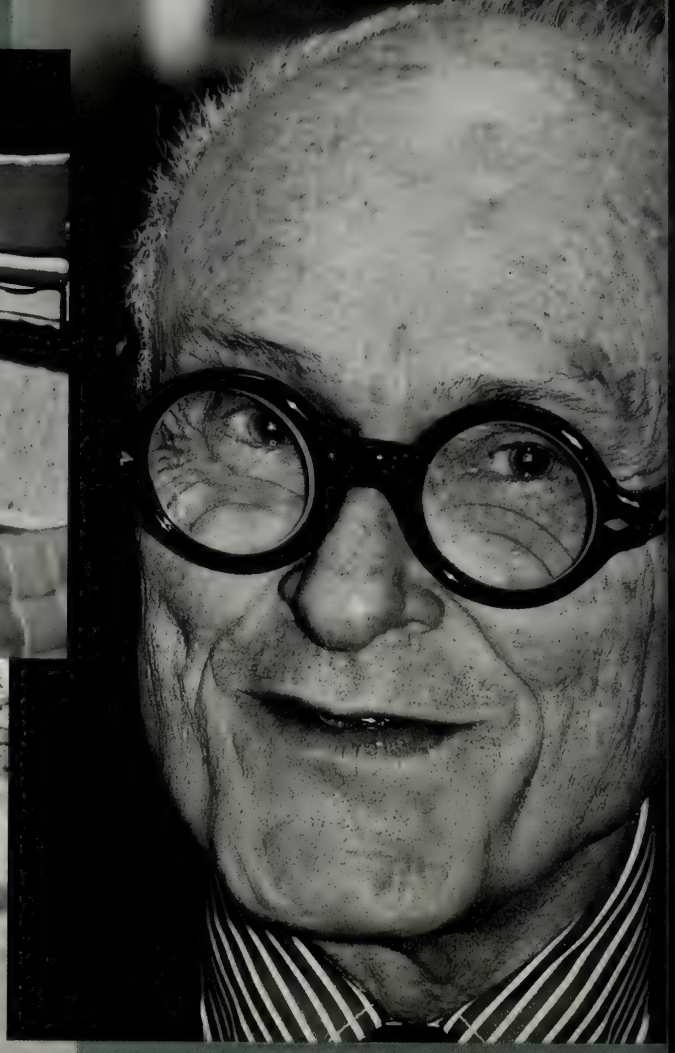
90-degree corner caps were used to connect four acrylic block panels together to form decorative, lit towers. The panels were mounted to the base and top piece with flat caps.



Aluminum mulls were used to connect these flat panels and radius walls together. A flat cap and mounting channel were used to mount the units to the base and the walls. Flat caps were also used to connect the desktop to the top of the panels.

CIRCLE 101 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/









Clockwise from top left, this page and opposite: Philip Johnson and Mies van der Rohe at MoMA's retrospective of Mies's work, 1947; Johnson in 1985; the Glass House, New Canaan, Connecticut, 1949; Johnson showing the model for the New York State Theater in 1961; Johnson (center) with Alfred Barr, Jr., and Margaret Scolari Barr in Cortona, Italy, in 1932.

PHOTOGRAPHY: © MOMA ARCHIVES (TOP LEFT); DOROTHY ALEXANDER (TOP

Philip Johnson:
An American Icon

Can any public figure expect a totally positive obituary today? Philip Johnson, FAIA, who died on January 25, 2005, at 98, probably would have said, "Of course not." He no doubt knew a "de-pedestalization" process had to occur as the media's payback for the fame and glory it bestowed on him during his career. To be more broad-minded, RECORD has asked three longtime observers of Johnson—one, an admirer; another, a detractor; and the third, his biographer—to address key aspects of his life, including its controversies. *Suzanne Stephens*



By Franz Schulze

While working on his biography, I was able to form a considered opinion of Philip Johnson as a person and a professional, and was inclined to believe the majority of his obituaries would be fairly positive. He spent seven decades at the center of the architectural universe—as designer, critic, historian, museum curator, and promoter of younger architects.

Johnson was also a wizard at working the media. In view of that, I am surprised by much of what I have read since his passing in January. More than a few well-informed contrary views have surfaced, notably in articles by Mark Stevens in *The New York Times* (January 31, 2005), Roger Kimball in *The New Criterion*'s Weblog *Armavirumque* (January 31, 2005), and by Andrew Saint in *The Guardian* (January 29, 2005). Each drew attention in some detail to Johnson's commitment to the Nazi cause, which was rooted in his privileged family life, his dismissal of the "lower orders" based largely on his worship of Friedrich Nietzsche, and a consequent love of power he saw manifest in the charismatic figure of Adolf Hitler.

In 1934, Johnson gave up a promising position as chair of the architecture department at the Museum of Modern Art and spent most of the next six years in pursuit of political goals that varied from following the bandwagon of the demagogic Louisiana politician Huey Long to running for office in his native Ohio on a populist, anticapitalist agenda to writing attacks on Franklin Delano Roosevelt for *Social Justice*, a periodical sponsored by the anti-Semitic "radio priest" Francis Coughlin, and eagerly following Hitler's Wehrmacht when it invaded Poland at the beginning of World War II. Though he shifted from one political objective to another during this period, he remained true to his belief in power, especially if manifest in someone—like Hitler or Long (or Mies van der Rohe, for that matter)—who seemed to Johnson a prophetic figure in the Nietzschean mold. He did not overtly surrender his political orientation until he was identified as a "fascist" in a best-selling book *Berlin Diary: The Journal of A Foreign Correspondent, 1934–1941*, by William L. Shirer, published in 1941. By then, Johnson had withdrawn from politics to enroll as an architecture student at Harvard in the fall of 1940. Even then, the exercise of power, now returned to the aesthetic realm, remained a central motivation.

Many of the obituaries, commenting on the body of his architectural work, have leveled tougher and more unsparing criticism than I anticipated. There has been little praise for the big corporate buildings, like the AT&T Building, now Sony Plaza (*1*), that brought him such a flood of publicity. The two works that have been remembered most affirmatively are small in size: the exquisite Museum for Pre-Columbian Art at Dumbarton Oaks in Washington, D.C. (*2*), and his own purist Glass House in New Canaan, Connecticut (page 177). And even the latter would not have been designed as it is without the model of Mies's Farnsworth House (1951). The obituaries have left the impression that many critics regard him primarily as a pasticheur.

Probably that is what Johnson was—a "flibbertigibbet," as he called himself. His mercurial intelligence com- *(continued on page 374)*

Franz Schulze, the author of Philip Johnson: Life and Work *(1994), is Betty Jane Schultz Hollender Professor of Art, Emeritus at Lake Forest College.*



1



2

1. ATT Building (now Sony Plaza),
New York, New York,
1984.
Philip Johnson and John Burgee
and Simmons Architects

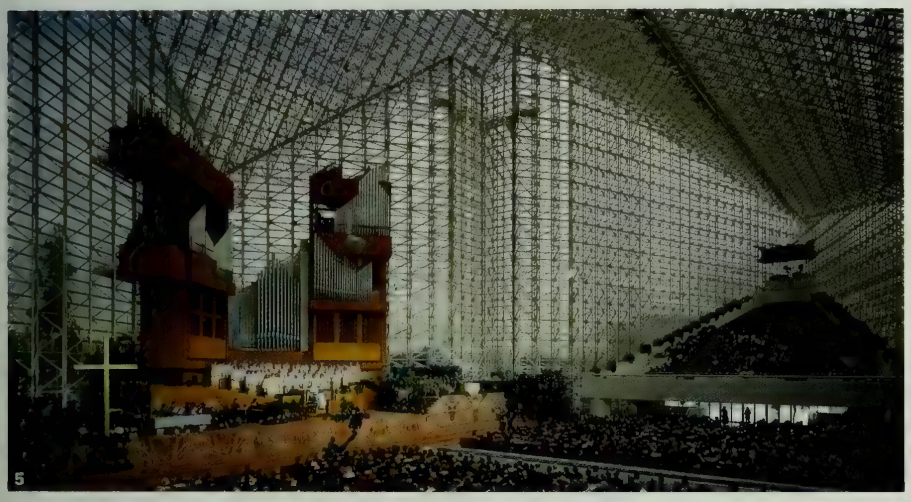
2. Museum for Pre-Columbian
Art, Dumbarton Oaks,
Washington, D.C.,
1963.
Philip Johnson Associates

3. Chapel of St. Basil,
University of St. Thomas,
Houston, Texas,
1997.
Philip Johnson, Ritchie & Fiore
Architects with John Manly
and Merriman Holt Architects

4. University of St. Thomas
master plan: Strake, Jones
and Welder Halls,
Houston, Texas,
1957–59.
Philip Johnson Associates
with Bolton & Barnstone


3


4


5

5. Crystal Cathedral,
Garden Grove, California,
1980.
Johnson/Burgee Architects
with Albert C. Martin Associates

6. IDS Center,
Minneapolis, Minnesota,
1973.
Philip Johnson and John Burgee
with Edward F. Baker Associates

7. Four Seasons Restaurant at
the Seagram Building,
New York, New York,
1959.
Philip Johnson with William
Pahlmann Associates


6


7

By Robert A.M. Stern

In the wake of his recent death, Philip Johnson has been lauded for his curatorial acumen, his social grace, and his collegiality, especially to the young. But he has not been praised for another attribute—that of being a very talented architect. Johnson deserves to be remembered for his architecture, which should be foremost in any assessment of his life.

Johnson was one of the commanding talents of the postwar generation of American architects. He built beautifully. Very many of his buildings challenged accepted formal tropes. Was he the greatest architect of the 20th century? I'll leave that assessment to others. What I will say is that not one building by Johnson has failed to give me pride in being an architect, in knowing what an architect can accomplish. I have learned something from every one of his buildings—and they have given me a great deal of pleasure.

Johnson was a master of planning. Indeed, I would say he was one of the few genuine functionalists among a generation that professed utility but seldom achieved it. He was also a master of siting and landscape, one of the very few in our time. Take the Glass House (page 177) and its outbuildings as a case in point. Over many years, I was lucky enough to frequently visit that consummate 20th-century estate park, as new buildings were added and the landscape evolved. Each building opened up a new architectural direction; even more remarkable was the placement of the buildings and the paths of "procession," to use Johnson's term, which connected them.

The Glass House as well as the Sculpture Garden at the Museum of Modern Art in New York (*10*) are acknowledged masterworks. But I would like to praise some other Johnson designs that embrace the landscape. For example, the Fort Worth Water Garden (*12*), where, in the center of a busy city, extraordinary geometries are cut into the earth to evoke the sounds and shapes of nature's aqueous crevasses without indulging in obvious representationalism. Another superb Johnson building-in-landscape, though of a completely different scale and character, is the Museum for Pre-Columbian Art at Dumbarton Oaks in Washington, D.C. (page 178, *2*). Nestled into greenery, its exquisitely detailed, bijoulike, shallow-domed galleries carried on round columns framing curved glass panels bring the spatial magic of late Roman architecture to life in a wholly modern way.

Philip Johnson and John Burgee's IDS Center, Minneapolis (page 179, *6*), propelled Johnson into the forefront of commercial architecture. Yet he also confronted the important issues of center-city urbanism, for he made a positive feature of Minneapolis's existing, vitality-draining, two-level pedestrian circulation system. Reimagining the central glass-covered light courts of 19th-century office buildings and hotels, he created one of the few convincing, lively, wholly enclosed urban public places of the postwar era.

After IDS, Johnson, working with Burgee, designed some of America's best skyscrapers. With the two Pennzoil towers in Houston (1976), he came closest of any architect to adapting the Minimalist sculpture of the 1960s and 1970s—such as the work *(continued on page 375)*

Robert A.M. Stern, FAIA, is principal of Robert A.M. Stern Architects and dean of the School of Architecture at Yale University.



8



9

8. Pennzoil Place,
Houston, Texas,
1976.
Johnson/Burgee Architects
with S.I. Morris Associates

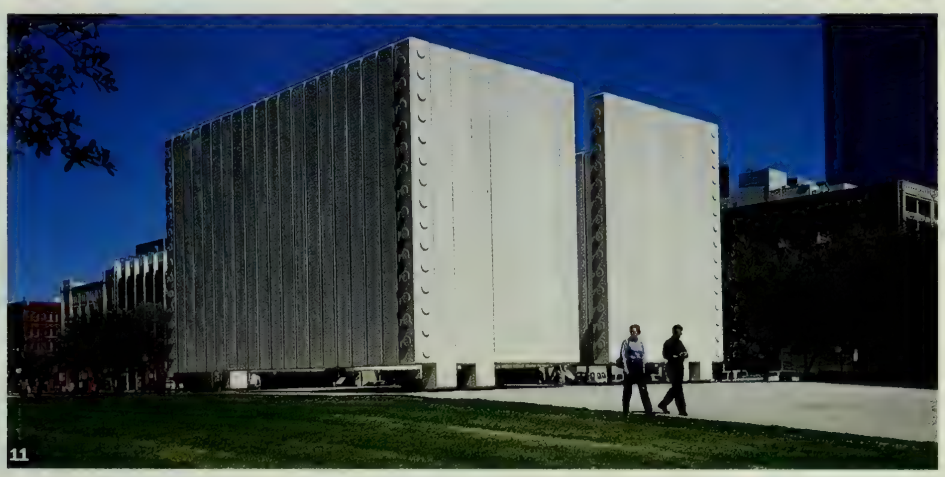
9. 53rd at Third ("Lipstick")
Building,
New York, New York,
1986.
John Burgee Architects with
Philip Johnson

10. Abby Aldrich Rockefeller
Sculpture Garden,
Museum of Modern Art,
New York, New York,
1953.
Philip Johnson Associates
with Landis Gores and George
Hopkinson; James Fanning,
landscape architect

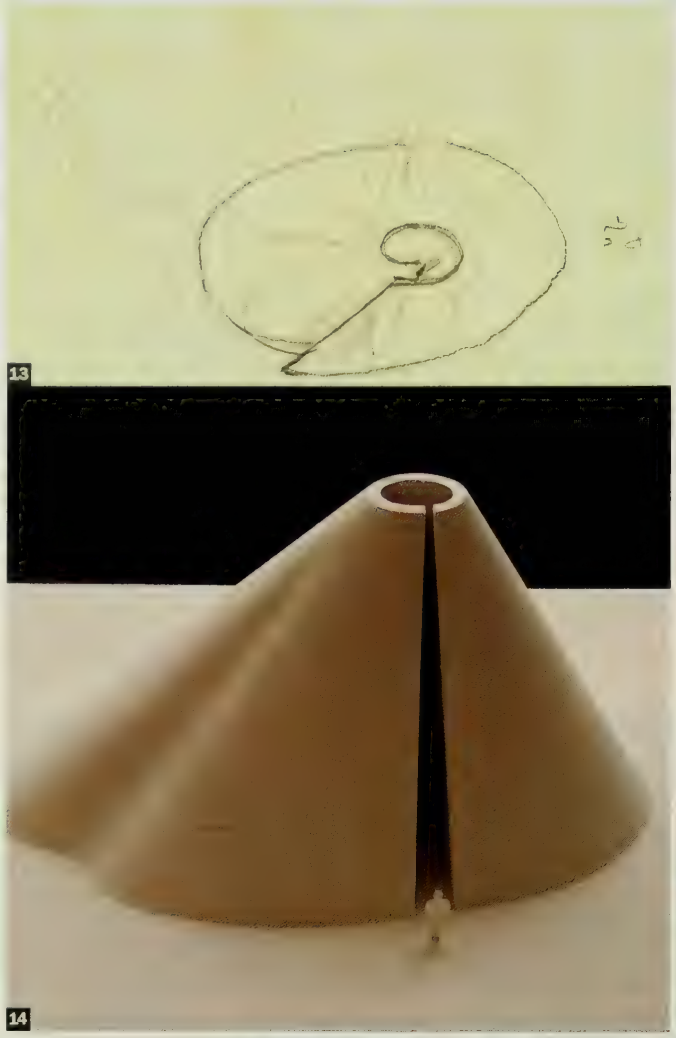
11. John F. Kennedy Memorial,
Dallas, Texas,
1970.
Philip Johnson

12. Fort Worth Water Garden,
Fort Worth, Texas,
1974.
Johnson/Burgee Architects


10


11


12



13

14



15



17



16

By Michael Sorkin

The past year has seen the demise of two major figures of American culture, filmmaker Russ Meyer and architect Philip Johnson. Although Meyer was the purer talent, both made enduring, seminal contributions to the ironic, vaguely pornographic, and deeply kitsch sensibility that has become one of the major markers of our contemporary creativity.

Meyer—the celebrated soft-core "King Leer"—began his career as a combat photographer during the Second World War, went on to make industrial films and take photographs for *Playboy*, leading to his cinematic breakthrough in 1959 with *The Immoral Mr. Teas*, a film which *Time* magazine suggested had "opened the flood gates of permissiveness as we know it in these United States." The film was Meyer's Glass House, for it put him on the map by exposing almost everything. His oeuvre went on to include such legendary works as *The Supervixens*, *Beyond the Valley of the Dolls*, *Beneath the Valley of the Ultravixens*, and *Faster Pussycat, Kill, Kill*, the latter described by John Waters as "beyond doubt the best movie ever made." Meyer himself responded to the film's cult status by insisting that "too much emphasis is put on it being significant."

The critic Roger Ebert—author of the screenplay for *Beyond the Valley of the Dolls*—described Meyer as having "a sensibility somewhere between Andy Warhol and Al Capp," a succinct appreciation. Meyer's legendary attachment to big breasts (often described by him in such architectural terms as "cantilevered," "superstructure," etc.) is strongly analogous to Johnson's feeling for architecture, which might, in its sensibility, be described as somewhere between Andy Warhol and Walt Disney. Both Meyer and Johnson were professionally inspired by a deeply felt connoisseurship of the chosen objects of their affection, and both devoted their lives to inventing forms of representation that were worshipful rather than inventive. Both also displayed a critical relationship to their own work that consistently refused to treat it seriously according to the canonical theories of the day. And both were clearly enabled by the sense of liberation that grew out of the styles of consumption that blossomed in the 1950s.

The central mass-cult figure of the period was certainly Disney, whose project suffuses the work of both Meyer and Johnson. For Johnson, the kitschily creative geography of Disneyland, with its recombinant approach to form and style, was the substrate of his own practice. By liberating the juxtaposition of nominally discrepant, phony mimetic architecture in space—Main Street, U.S.A., terminated by Ludwig's Castle—Disney anticipated the temporal trajectory of Johnson's career, which in due course managed to superficially ape virtually every known architectural style and, in turn, freed a legion of hacks to do the same.

Because Johnson and Meyer so succinctly embody the sense of excess that is central to kitsch, both are likely to be remembered less as auteurs then as exemplars. Both represent the entertaining but vapid core of American mass culture, the complete disengagement of form from constructive systems of meaning, amusing inducements to stop thinking. Although Meyer was well grounded technically *(continued on page 377)*



13. Al-Thani Sculpture (conceptual sketch) for Sheikh Saud Bin Mohammad Ali Al-Thani Doha, The State of Qatar, 2005 (completion). Philip Johnson/Alan Ritchie Architects

14. Al-Thani Sculpture (model) for Sheikh Saud Bin Mohammad Ali Al-Thani Doha, The State of Qatar, 2005 (completion). Philip Johnson/Alan Ritchie Architects

15. The Metropolitan (apartment building), New York, New York, 2005. Philip Johnson/Alan Ritchie Architects

16. Cathedral of Hope, Dallas, Texas, 2008 (completion). Philip Johnson/Alan Ritchie Architects

17. TransGas Energy Systems, Cogeneration Plant, Brooklyn, New York, 2009 (completion). Philip Johnson/Alan Ritchie Architects

Michael Sorkin, a RECORD *contributing editor, is director of the Graduate Urban Design Program at the City College of New York.*

Tensioned Membrane. Relaxing Architecture.

GRABOPLAN

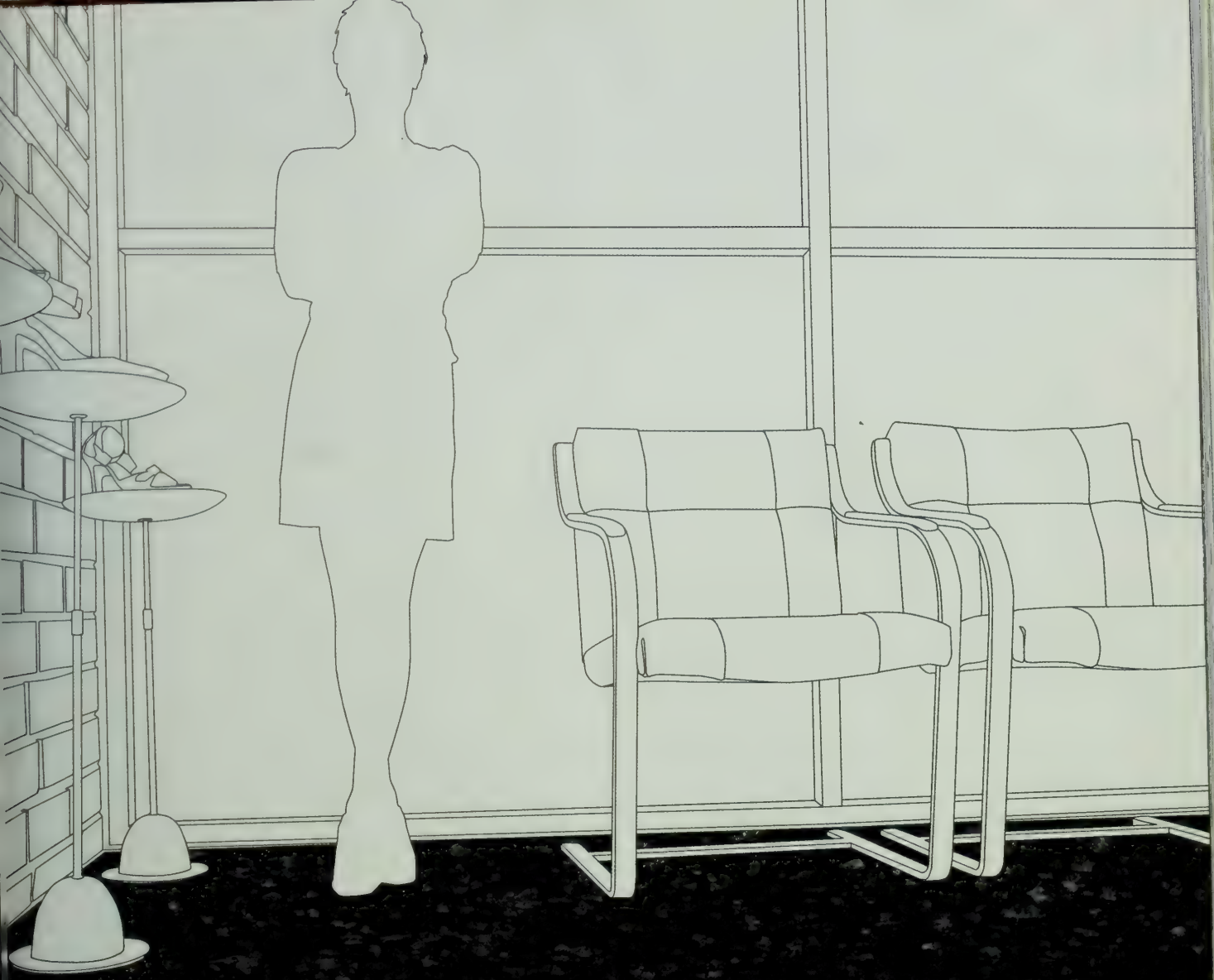


Tensioned membrane
structures are relaxing. And fun.
Go to a football game, do some shopping,
board a cruise ship, catch a plane, listen to a concert.
Do it all under a Graboplan membrane roof that protects
you from glaring sunlight, driving rain and howling snowfall.
All while transmitting comfortable diffused natural light.
Relax. Graboplan structures take on the coldest winters,
the hottest summers, the strongest winds.
Any size structure, any place, any season.

716.759.1170 www.graboplan.us

Graboplan

CIRCLE 102 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



LONNOVA UV

For inner space.
Award winning vinyl flooring with starlike spectra.
Dry erase, easy care, UV cured urethane finish.

Catch our latest innovations at
JCFF

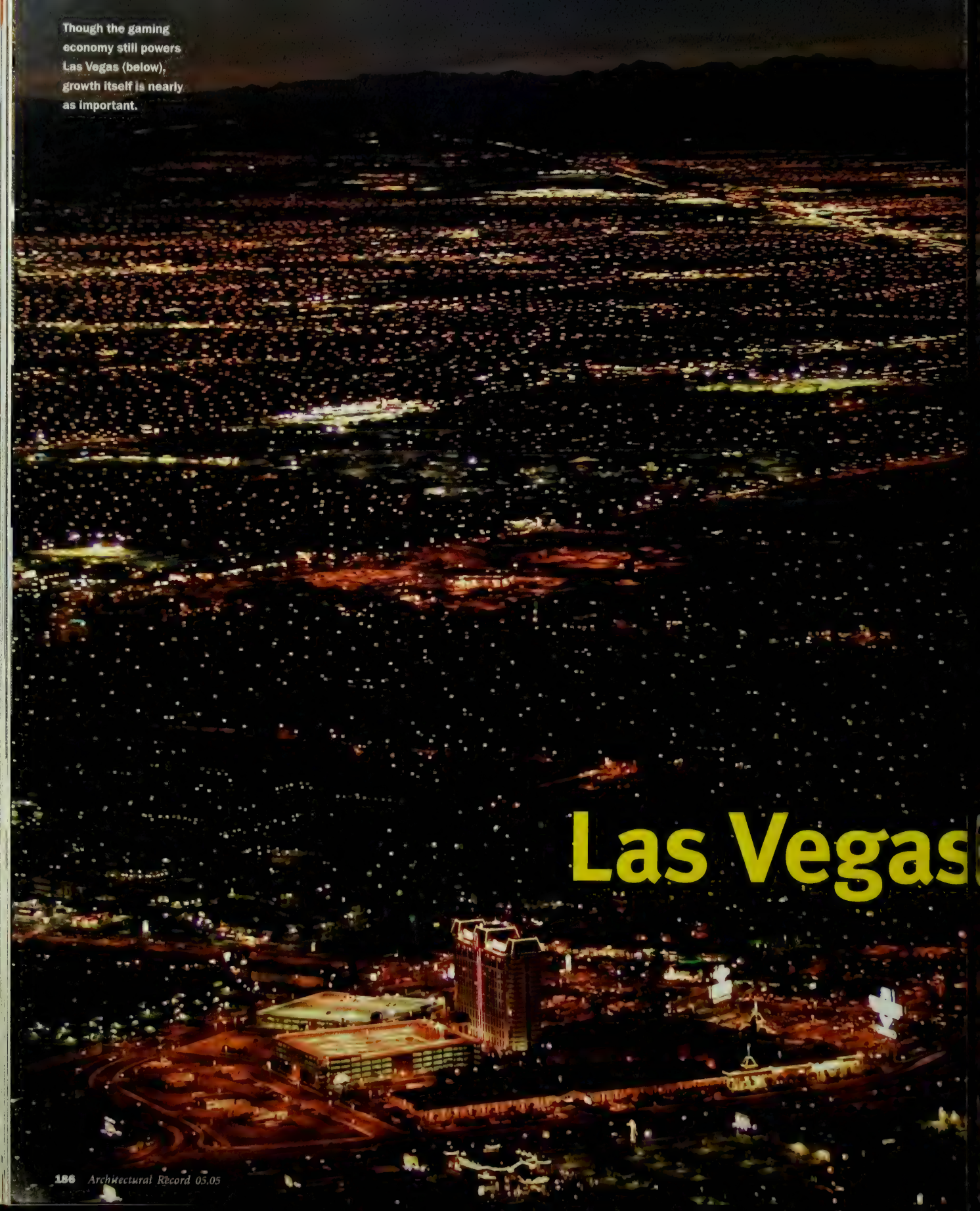
New York, NY
May 14 - 17 2005
Exhibit No.1244

LonNova Moonlit # 295
Low maintenance. UV cured urethane finish.

LONSEAL
FLOORING

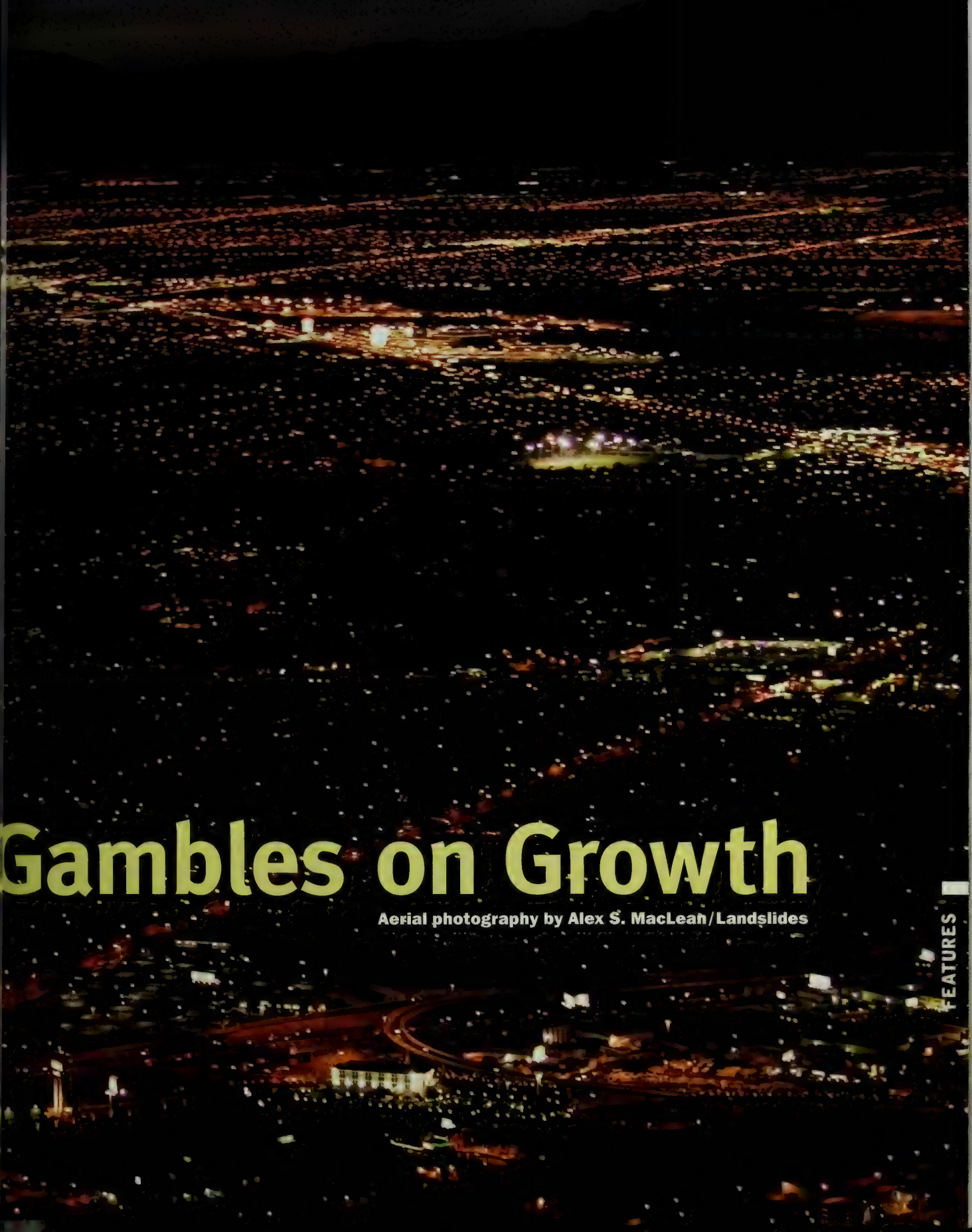
PHONE 800 832 7111 • WWW.LONSEAL.COM

CIRCLE 103 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Though the gaming economy still powers Las Vegas (below), growth itself is nearly as important.

Las Vegas



Gambles on Growth

Aerial photography by Alex S. MacLean/Landslides

By James S. Russell, AIA

It still galls a lot of people that a Strip festooned with a desperate neon exuberance, that preys on get-rich-quick dreams and advertises has-been headliners, could become an economically vital metropolis of 1.8 million people. Every year tens of thousands of recent immigrants realize the quintessential American desire to make it in Las Vegas.

Las Vegas happily confounds its naysayers. It has created a vibrant metropolitan economy on gambling, an activity that remains a vice in the eyes of many Americans (one that tends to attract other vices). Pundits periodically predict the demise of this, um, house-of-cards economy. But smart money has been ignoring the warning signs for decades. Las Vegas found an economic-success formula that eludes so many other places: high growth combined with low costs. It's been affordable to all but the lowest-paid service workers—and many of them are far better paid than they are elsewhere because Las Vegas is one of the most unionized cities in the country. Low taxes and hands-off regulators make it easy to start a business here, and easy for those businesses to expand.

Rapid population growth (around 100,000 per year) adds new customers and new opportunities every day. Designer Richard McCann and two partners came up with the idea for Loft 5, a stylishly contemporary residential project on the fast-developing south Strip. "It's been a dream project," he said by cell phone. "We conceived the project, tied-up the land, and got a partner in two weeks." The project broke ground last month with 65 percent of the units presold. A local architect has prepared working drawings of McCann's design because he has been out of architecture school only a year and a half. "No one's ever gone broke overestimating the rate of growth in Las Vegas," comments Hal Rothman, a local historian, author of *Neon Metropolis* (Routledge, 2003), radio host, and professor at the University of Nevada Las Vegas.

"NO ONE'S EVER GONE BROKE OVERESTIMATING THE RATE OF GROWTH IN LAS VEGAS."

Affordable no more

Skyrocketing house prices could kill the goose that lays the glitter-encrusted golden eggs, if only because affordability has for so long been a draw. The burgeoning casino industry needs armies of service workers, people often lacking the skills to find good-paying jobs elsewhere, who have been attracted to Las Vegas by its low costs. The just-opened $2.6 billion Wynn Las Vegas casino complex added as many as 10,000 jobs all by itself. The median house price, though, has risen from $140,000 in 1997 to $287,000 at the end of 2004. "Until 2001, two entry-level service workers making 9 to 10 dollars an hour could buy a modest house here," said Steve van Gorp, redevelopment manager for the City of Las Vegas.

Las Vegas is feeling the home-price-appreciation wave evident nationwide, but the recent price spikes have to do with unique conditions. In years past, the metro area has been able to accommodate rapid growth by developing massive empty tracts





Las Vegas builders have accommodated growth by making deals for huge tracts of federal land. Fewer such tracts are available as the city bumps up against sensitive land at its edges.

held by the Federal Bureau of Land Management (BLM). Howard Hughes famously obtained 22,500 BLM acres, where his corporation later developed the sprawling planned community of Summerlin at the western edge of the city, jump-starting the current wave of megagrowth.

Summerlin's first home sale was in 1991. Now only 6,000 of its acres remain as it heads rapidly to its ultimate population of 80,000. Dozens of other planned communities, their size each measured in square miles, have sprouted over the past two decades. But development on such a scale is now history because growth has consumed much of the land BLM is able to dispose of, explained Rod Allison, a planning manager in Clark County's Comprehensive Planning unit. (The county encompasses all of metropolitan Las Vegas.) Raw land prices are about 10 times higher than they were four years ago. "Even if there's not an actual scarcity, there's a scarcity dynamic," says Robert Lang, of the Metropolitan Institute at Virginia Tech, who studied the area as part of research he's done on fast-growing "boomburgs." As you get near capacity, he adds, "you build out rich, not poor."

There's little handwringing about this transformed development economy. It's seen as just another opportunity for those visionary enough to figure out how to profit by it. As it has tended to do, Las Vegas casually tosses out the old development model and just as casually embraces a new one. "Builders have tried to keep housing affordable by shrinking lot sizes," says Rothman. Even single-family housing has tightened up to as many as 14 units per acre, comparable to the densities of brownstone blocks in cities like New York or Boston.

BUILDERS HAVE PLANNED 300- AND 400-FOOT-TALL TOWERS ALL OVER THE VALLEY.

What's built today conspicuously lacks the charm of the Back Bay or Brooklyn Heights, however. At the urban edge, beyond the partly finished beltway, the boxy beige stucco houses have simply been shoved ever closer together. "You can't even drive a car between them," marvels Lang. Punched vinyl windows gaze across the few feet of graveled areaway to other punched vinyl windows. Vistas to the stunning mountains or the glittering Strip are mystifyingly ignored. It's a vision of suburbia so degraded that the advantages of the single-family home have all but disappeared.

Summerlin leads the way in planned design locally, and Charles Kubat, who was a vice president for planning and design at the Howard Hughes Corporation (and is now vice president of planning and design at Carina Corporation, a builder), showed me a neighborhood where density is handled more gracefully. Lot lines of houses zigzagged to accommodate off-street garages and pleasing shared entry courtyards. Graceful as these gestures are, they are rare. The design challenge of density in Las Vegas has yet to find uniquely local expression. If density can't be more often combined with genuine amenity, it's not hard to imagine a backlash developing against it. Instead, most builders sell packages of upgraded appliances or the dubious prestige and security of gated "communities." (The ubiquity of gates notwithstanding, burglaries and rape, like most categories of crime, run much higher than national averages here.)

High-rise craze

Closer to the Strip, Las Vegas has decided there's nowhere to go but up—way up. Rapidly inflating land costs have caused developers to skip over conventional higher-density solutions, like garden apartments. "We have 28 high-rise condo projects already approved," says Van Gorp, "with 25 more in the pipeline." Most of the Strip condos have been snapped up by second and third home buyers, Strip celebrities, and speculators. But 400-foot buildings have been proposed all over the valley, combining apartments with a hotel or with shopping. This portends a dramatic change in the city's form. "Only six years ago, we couldn't get anyone interested in building mixed-use projects," said the county's Allison. "Now all that has changed."

Although I kept hearing about an emerging Las Vegas style, developers of these large-scale projects have so far imported types developed elsewhere. SoHo Lofts (JMA Architecture) appropriates a name evoking industrial space, wraps it in South Beach Miami Moderne, and stacks it atop a blank-walled parking garage. Donald Trump will tuck a pair of gold-reflective-glass condo towers between two casinos. Van Gorp's conference room is piled with presentations from developers from as far away as New York and Australia.

The prospect of new towers blocking vistas to the celebrated Red Rocks, just west of the city, sent normally laissez-faire planners scurrying. Now the county has defined several zones where mixed-use high-rises would be permitted. "Our commissioners wanted some predictability about high-rise, high-density projects for infrastructure and service providers," explained Allison. The areas for large-scale development are nevertheless very generous, about doubling the current length of the Strip, for example, with several other nodes and corridors of development defined along the busiest arterials.

Though the new rules promote pedestrian orientation, they offer developers plenty of leeway. "We want interaction of pedestrians with buildings," said Barbara Ginoulias, the director of comprehensive planning. "But we don't require buildings to come up front. We're trying to provide as much flexibility as possible." Van Gorp, of the city, is similarly hands-off: "We don't set minimum or maximum parcel sizes. We don't have height restrictions or setback requirements or minimum or maximum floor-area ratios. How much parking you supply is negotiable." The easygoing attitude counts on competition to deliver quality—generally a dubious assumption in real estate.

It's hard to imagine how this white-hot market will play out, especially as so many of the proposed projects have barely gotten beyond sketch stage. If interest rates rise quickly, the high-rise market may cool just as quickly as it heated up. But few people locally think it will. Such confidence derives from forecasts for ever-surging growth: 42,000 new jobs this year, according to Van Gorp, most of them in the Strip, where visitor numbers may swell to almost 40 million. The Strip economy now depends less on gaming and more on packaging gambling with shopping and entertainment. Nongaming revenues at Strip properties now outstrip gaming and are moving up.

Hypergrowth strains services and infrastructure. New schools open more than once a month yet still contend with overcrowding and long school years. Parks can't be built fast enough: One road project ends; it clogs; another begins. There are water worries and air-quality concerns (which could lead to the loss of







At the city's southern edge, the ranchettes of Las Vegas's anything-goes era are being surrounded by high-density housing (above). A beltway 15 years in construction can't keep up with growth. The frontage roads (left) will become a full-fledged freeway by 2013. Growth is heading for the treasured (and protected) Red Rocks (right).



federal transportation funds). "If you live here, it feels as if the quality of your life is always declining," says Rothman. "Newcomers don't experience it the same way. If you came from Oxnard, California, you find it cheaper, with less traffic. Everything is newer, shinier, and it seems more fun."

An open-minded observer can't fail to be impressed by the city's can-do attitude in the face of a fast-changing and uncertain future. Of course, the city has numerous times tossed out the not-very-old for the entirely new. The Strip's glitter may be heedlessly borrowed and nostalgic, but no one worries about its inauthenticity. Faux is the local real.

Signs of civilized life?

"There is life off the Strip!" a local declared during a conference I attended some years ago. The vast majority of the city, where most people live, can look invisible, though, because it has no expression. The neighborhood social hub, where people shop, bowl, sit down for a restaurant meal, or catch a movie, is—what else?—a unit of the Station casino chain.

In the early 1990s, a series of local public libraries were celebrated nationwide, not just because the program's leader, Charles Hunsberger, brought in talents from all over (Antoine Predock, Michael Graves, Meyer Scherer Rockcastle with local firm Tate Snyder Kimsey). He also made sure the designs engaged people, the sharp local light, and the rugged landscape. Hunsberger programmed space for arts organizations, even ones not yet created, knowing the community would one day want them. Politicians crusaded against the libraries' supposed extravagance, tapping into a local ethos deeply suspicious of government. "When Hunsberger lost his job," commented Eric Strain, a local architect, "the community pulled back in terms of making design important." Yet the libraries remain the neighborhood's chief assertion of a civic life apart from the Strip. Subsequent library bond issues have failed, so the older buildings' arts spaces have largely filled with books.

A more positive attitude to public work may be developing, evident in new work at the University of Nevada Las Vegas, where Strain teaches; a federal courthouse by Mehrdad Yazdani of CannonDworsky; a new judicial center by Tate Snyder Kimsey; and an interpretive complex planned for the Las Vegas Springs Preserve, by several architects led by Lucchesi Galati. Van Gorp hopes architect selection can soon begin for a planned performing-arts center downtown.

A conventional architect-designed civic identity may not easily fit Las Vegas's shape-shifting sensibility. "You don't worry about the past in Las Vegas," says Kubat. "You come here to make a future." In interviews, I heard a nostalgia for the historically layered gentility of older, greener, less-hard-edged places. There is a perpetual consideration of whether—notwithstanding the ubiquity of female cleavage at billboard scale—Las Vegas has yet become normal. For converts, its still unformed identity exerts a powerful pull. Cities have always been the place where people could shed their old skins and become someone new, and this city's very lack of identity makes it easy for it to reinvent itself every half decade or so. Kubat suggested that older places with a clearer identity, a layering of history, and a set way of doing things had lost an edge Las Vegas retains. "This place is very entrepreneurial: It rewards people who take risks, who make deals, who try something new." By contrast, in Baltimore, where Kubat used to work (with RKTL), "It wasn't easy to build if it was not a center-hall colonial." Will Las Vegas become too normal, losing in the process its heady sense of possibility and perpetual opportunity?

California once seemed to offer the chance, Kubat added, "to start new in the orange groves." Now the groves are gone and the state's high costs, highway gridlock, and hassles feed a steady stream of fed-up residents to Las Vegas. People say the city won't go the Los Angeles route, but it's unclear how it won't.

If you are looking for a conventional suburban refuge or an urban civility, you'll find little of either in Las Vegas among the never-finished roads and the perpetual imploding of the old in favor of the new. The place "exudes energy and accepts anyone," as Kubat says. The flip side is its transience, reflected in older neighborhoods rapidly filling with those who didn't make it here, or haven't made it yet. Schools cope with ever-shifting student populations and a high dropout rate. Adds Rothman, "For a lot of people, it's a court of last resort. That's motivating. But the allure of gambling, drinking—this culture of excess—exploits your weaknesses." Pawn shops are as ubiquitous in strip malls as fast food. For better *and* worse, Las Vegas is the closest you'll find today to the awe-inspiring chaos that accompanied the giddy growth of America's industrial-era metropolises. ■





Growing Up

To the casual observer, Las Vegas has plenty of room to grow, but the federal government has few massive tracts to release, so developers are heading skyward. Buyers snapped up units in the gated Turnberry Place (top), along the Strip, inspiring others to go high-rise. Local officials now encourage developers to include public access. The 73-story Ivana (yes, *that* Ivana), by the local firm JMA Architecture, could be the tallest residential building west of the Mississippi River (rendering, bottom).



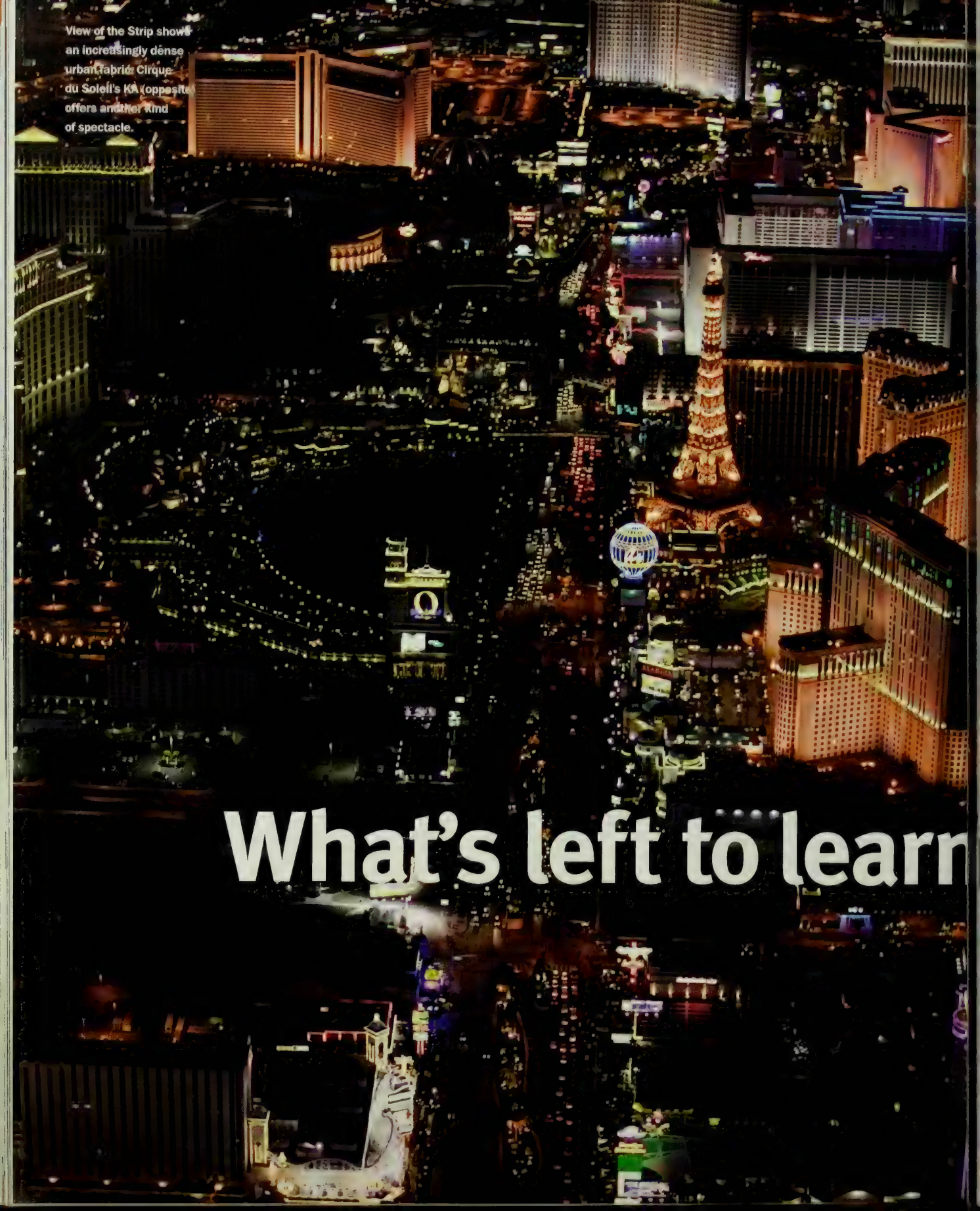
RENDERING: COURTESY JMA ARCHITECTURE (THIS PAGE, BOTTOM LEFT)





To keep costs down (and to limit the use of costly water), Las Vegas builders long ago abandoned the suburban norm of quarter-acre lots, even on this golf-course development (left and right). New growth occurs on ever-tighter lots (above), at up to 14 houses per acre.





View of the Strip shows an increasingly dense urban fabric. Cirque du Soleil's KÀ (opposite) offers another kind of spectacle.

What's left to learn

By Clifford A. Pearson

'rom Las Vegas?

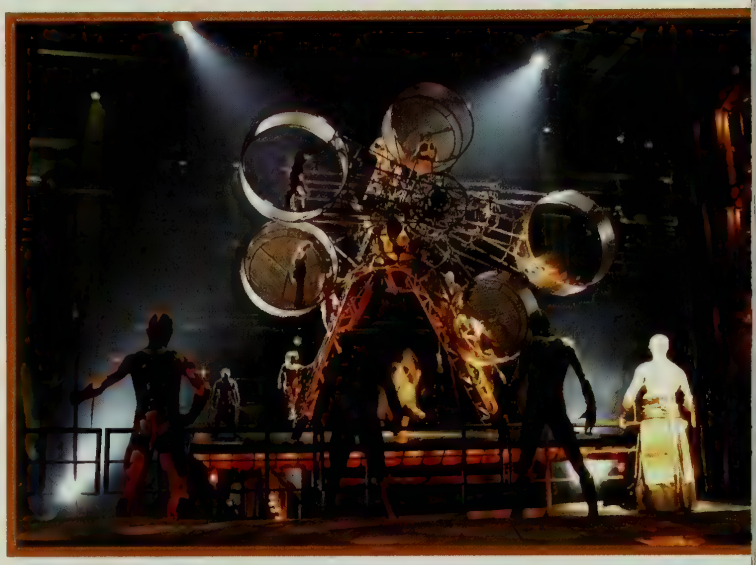
Thirty-three years after Robert Venturi, Denise Scott Brown, and Steven Izenour shook up the architectural establishment with *Learning from Las Vegas*, no one bats an eye when some highbrow architect professes a love of the Strip. Like profanity and nudity on cable TV, the gigawatt kitsch of the nation's most famous commercial boulevard has become just another buzz in the multibillion-dollar white noise generated by our pop-culture dream machine. We live in a baroque era when companies of all kinds compete for our attention with ever-more-elaborate displays of visual, auditory, visceral, even olfactory stimulation. We've seen it and heard it all. Architects no longer dismiss the Vegas Strip; they just yawn and demand, "Tell me something I don't already know."

The latest-greatest mentality has been steadily upping the ante in Vegas for years now. Way back in 1989, Steve Wynn built the 3,000-room Mirage Hotel-Casino with a dolphin pool, white-tiger habitat, and a volcano that erupts on schedule, all for a mere $630 million. Four years later, the 5,000-room MGM Grand broke the $1 billion mark. And just last month, Wynn opened the doors of his eponymous gambling-and-entertainment resort, a 42-story, copper-glazed complex with 2,700 hotel rooms; luxury retailers such as Louis Vuitton, Dior, and Manolo Blahnik; a branch of New York's too-cool bistro Balthazar; and outside, a 150-foot-tall mountain with a five-story waterfall. Price tag: around $2.7 billion.

The blurring of high and low cultures, art and commerce—a phenomenon that seems almost to define our society today—happens in Vegas with a vengeance. Think of Rem Koolhaas's Guggenheim-Hermitage at the faux-Renaissance Venetian Resort Hotel Casino. Or deluxe French chef Alain Ducasse's Mix restaurant at THEhotel at the Mandalay Bay complex. Cirque du Soleil, which started in Quebec in 1984 with a bunch of avant-garde street performers, has morphed into Vegas's reigning spectacle manufacturer, with four permanent productions in town, the latest of which, KÀ (pictured above), cost $165 million to build and produce .

Of course, Venturi, Scott Brown, and Izenour talked about all this in their book, though the scale, scope, and intensity of the sensory and cultural juxtapositions in the Vegas of 1972 pale in comparison to the experiential collage encountered by visitors today. So is 21st-century Vegas just the old one on steroids?

In some intriguing ways, the Las Vegas of 2005 has become a different beast, not just a bigger one in a glitzier costume. The Vegas described by Venturi and company was a cartoon city, its main strip a line in the desert, a scenographic procession of decorated sheds and "ducks" best appreciated in a car moving at 40 miles an hour. (As defined by the Venturi gang, "ducks" are buildings in the shape of their function, the most famous of which is the roadside store in Long Island that sells freshly killed ducks.) Back in 1972, Las Vegas was a two-dimensional experience—colorful, but flat as a billboard. There wasn't really much behind the neon signs, except oceans of undifferentiated gambling space and all-you-can-eat buffet pens. Today, Las Vegas has developed its third dimension, offering fun that goes beyond the facade. In fact, the most interesting architectural experiences now occur deep within the sprawling casino complexes—in the remarkable restaurants, bars, lounges, and stores that have been designed by big-name architects from around the country. "What you find now are pockets of high design tucked inside huge buildings," says Adrian Jones, a senior



designer in the local firm Jones Greenwold Architecture. Jones, who grew up in Nevada, is part of the second generation of his family involved in the firm and is taking it in a new direction, away from suburban-developer work and into the edgier realm of attention-getting interiors.

Recently, Jones completed a very hip wine bar and store, 55 Degrees, at Mandalay Bay, which features a sleek, clear-resin tasting counter, fiberglass wine racks, and an aesthetic as crisp as a chilled Sancerre. New York designers such as Adam Tihany, Tony Chi, and Jeffrey Beers are busy doing restaurants all over town, and even major architects such as Thom Mayne have designed innovative interiors such as those for the restaurants Lutèce and Tsunami at the Venetian hotel [RECORD, September 2000, page 144]. "The theming that you saw in the 1980s and '90s is out," states Jones. "We're not doing Bellagios anymore." Instead, designers are finding inspiration in fashion, the media, and global brands such as Louis Vuitton that are using design to create modern identities, explains Jones.

This growing sophistication in taste reflects an increasingly urban environment. Thirty years ago, all of the major casinos on the Vegas Strip sat behind enormous parking lots, rising like giant drive-in movie screens to beckon motorists with flickering neon images. Today, the casinos have moved parking into garages behind the hotels and engage the glamorous street with eye-popping attractions such as exploding volcanoes, danc-





Project CityCenter (above) promises a mixed-use neighborhood on the Strip. The monorail (left) now connects seven casinos and the convention center. Loft 5 (right), by Jones & Greenwold, will offer urban-style condos. Wynn Las Vegas (opposite, top) opened in April. Chef Alain Ducasse opened Mix (opposite, bottom) in THEhotel.



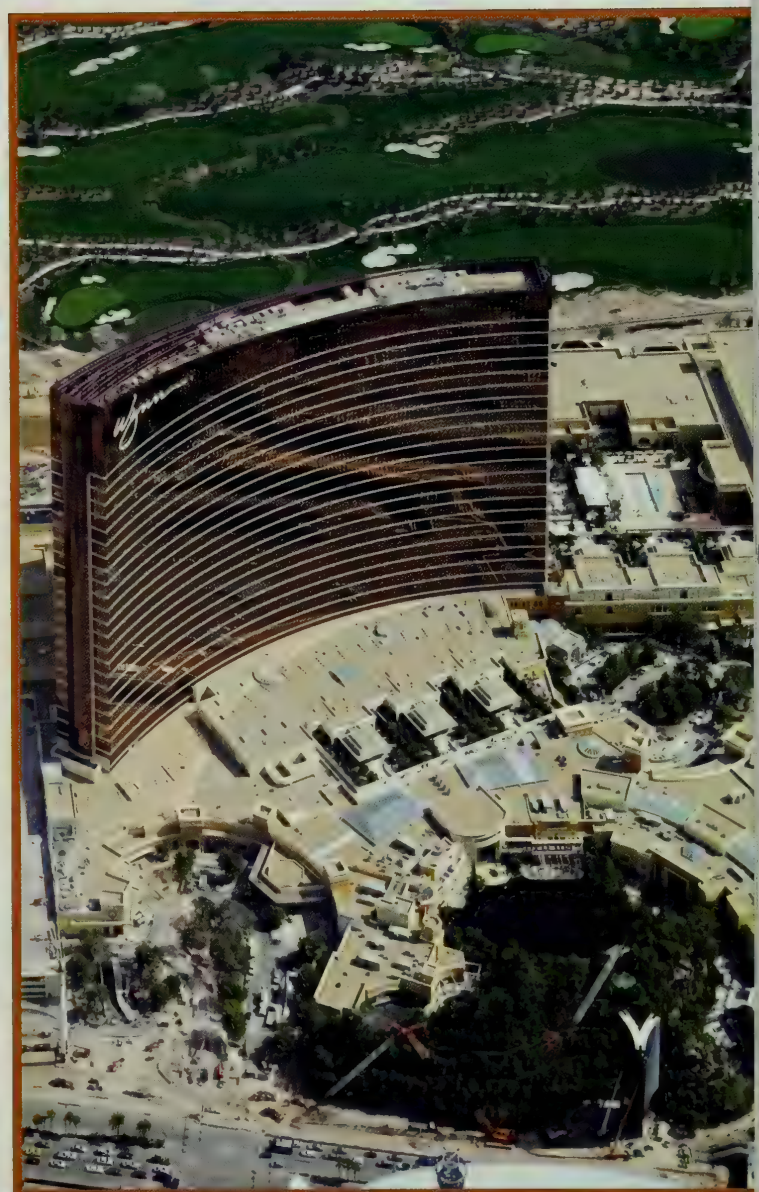
ing fountains, and battling pirate ships. People actually walk along the Strip now to catch all the free shows and then pop into a casino or shopping complex for some air-conditioning. Enjoying the view at 40 miles an hour isn't really an option anymore, since the traffic on the Strip at almost all hours is so bad. Luckily, a monorail runs for about four miles behind many of the casinos, connecting them to the convention center and offering a mass-transit option in what had been the most suburban of places. "The monorail is creating a new front door for all these casinos," states J.F. Finn, a principal at Gensler, which helped put together the financing for the private rail line and designed several of the stations. "It's going to open up a lot of development on what had been the back side of these properties," explains Finn. So the Strip is feeding growth beyond its boundaries and may become the spine of a traffic network, especially if the monorail is extended to the old downtown and the airport.

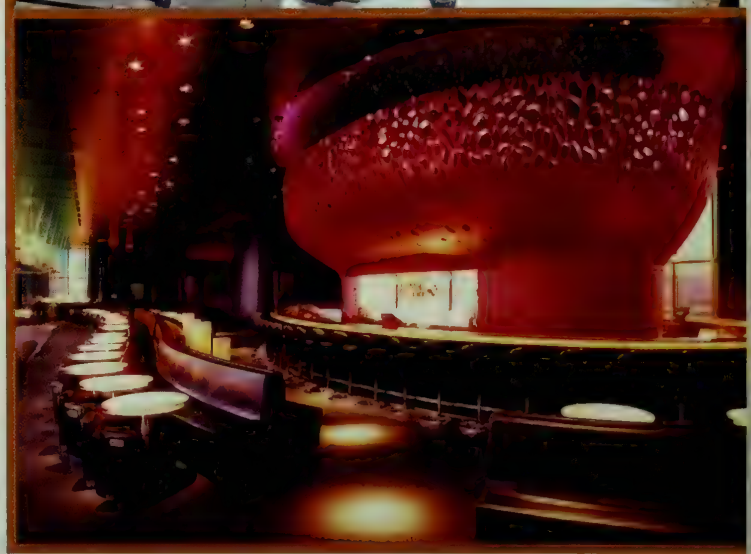
In the past, locals avoided the Strip like the plague. Hordes of overweight tourists, miles of overpriced shops, and acres of gaming tables provided plenty of good reasons to steer clear. But now a number of developers are building apartment towers either on or close to the big boulevard, betting that people want to live close to the action. In one of the biggest gambles in recent years, MGM Mirage is developing a 66-acre site on the Strip south of the Bellagio as a mixed-use "city within a city" that will feature a series of condo towers with 1,650 residences, 550,000 square feet of retail, dining, and entertainment space, and a 4,000-room casino hotel. "The idea is to build a neighborhood, a high-density urban environment with lots of pedestrian activity and outdoor spaces," says Peter Cavaluzzi, the design principal at Ehrenkrantz, Eckstut & Kuhn Architects, which is designing the master plan for the development called Project CityCenter. "We want to create a real place, not an 'attraction,'" explains Stanton Eckstut, the principal in charge of the project. "This represents a maturing of Las Vegas as a city,"

"IS THE ROWDY TOWN STUCK IN ITS URBAN ADOLESCENCE READY TO GROW UP?"

adds Eckstut. "It's about creating urban fabric and permanence." Gensler is serving as executive architect for the $6 billion-project, coordinating the work of what it is expected will be a number of different architects designing various pieces. The developer has already signed up Cesar Pelli to do the hotel.

Who would have imagined that the designers most responsible for New York's Battery Park City would hit the jackpot in Las Vegas? Does this really mean that the rowdy town seemingly stuck in its urban adolescence is ready to grow up and behave? Well, maybe. The days when the big casinos would essentially give away food, drinks, and hotel rooms to entice people to gamble are already gone. Now the casinos are making about the same amount of money on shopping, dining, entertainment, hotel rooms, and property development as they do on gaming. "They're realizing that they're really in the real estate business," says Gensler's Finn. It's a whole new mentality that will affect all aspects of the city's built environment. What architects need to learn from Las Vegas today is how America's quintessential suburban place can go urban. ■





NICK MERRICK/HEDRICH BLESSING (OPPOSITE, BOTTOM LEFT)

classic details
MODERN INSTALLATION



GRAND AMERICA HOTEL

SALT LAKE CITY, UTAH

BETHEL WHITE GRANITE

At KEPCO+, we specialize in the design and installation
natural stone cladding systems. Each and every project
clad is unique based on the desires of the client and t
specifications of the project - no two KEPCO+ projects a
the same. Whether your next project incorporates clas
details or just classic style, we can help you determine t
most effective and efficient cladding choice.

TO LEARN MORE, VISIT US AT AIA - BOOTH #51

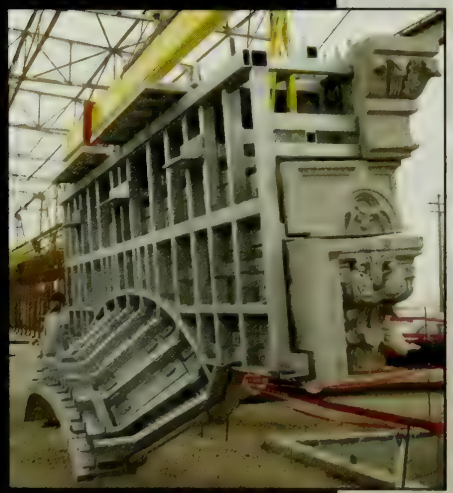


NAUVOO TEMPLE

NAUVOO, IL

ALABAMA LIMESTONE





90 WEST BUILDING

NEW YORK CITY, NY

ENGLISHMAN'S BAY GRANITE

KEPCO+
Architectural Cladding Systems
www.kepcoplus.com

1985-2005
celebrating 20 years

Membe
MARBL
INSTITUT
of Americ

CIRCLE 104 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Julius Blum & Co., Inc.

New Catalog 18 and CD Now Available!





JuliusBlum&Co.Inc.'s complete line of stock components for architectural and metal work is available for immediate shipment from stock. Our new Catalog 18 and CD provide full information and CAD drawings on Glass Railing, Pipe Railing, Traditional Railing, Treillage and Ornaments, Carlstadt® System, Handrail Brackets, Elevator Cab Components, and Stock Tubing, Bars and Shapes.

Call or email us today for your free copy of our new Catalog 18 and accompanying CD to view our inventory in aluminum, bronze, nickel-silver, stainless steel and malleable iron.

JuliusBlum&Co.Inc. P.O. Box 816 Carlstadt, NJ 07072 ■ 800 526 6293 ■ 201 438 4600 ■ Fax 201 438 6003 ■ www.juliusblum.com

CIRCLE 105 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

LEHIGH™ WHITE CEMENT



Free to visualize...

Visit our Booth #1055
at the 2005 AIA National Convention



Lehigh Cement Company/White Cement Division
7660 Imperial Way • Allentown, PA 18195
800-523-5488 • 610-366-4600
Fax 610-366-4638 • email info@lehighwhitecement.com

Concrete Thinking for a sustainable world

CONTINUING EDUCATION AIA

www.lehighwhitecement.com

SAVES MONEY, TIME – AND THE DAY.

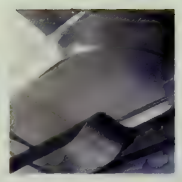


THE KNAUF KOOLDUCT® SYSTEM SIMPLIFIES EVEN THE MOST DIFFICULT DUCTWORK CHALLENGES.

Introducing the Knauf KoolDuct system – the phenolic foam-based, pre-insulated duct system that provides an energy-efficient, space-saving, total low-cost solution for the commercial and industrial markets. The KoolDuct system provides superior thermal performance with airtight efficiency, exceeding SMACNA (Class 6) air leakage requirements. Its sealed, aluminum-faced airstream surface is ideally suited for high specification applications. And the Knauf KoolDuct system's lightweight design helps cut installation time in half.

Stay on time and on budget with Knauf KoolDuct, a proven system that has performed in high-profile projects worldwide. For more information contact Knauf at 1-800-825-4434 ext. 8283 or visit our Web site at www.KnaufUSA.com.





KNAUF

"This is my insulation."®

© 2005 Knauf Insulation GmbH.

CIRCLE 107 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The marble-shingled skin (below and opposite) gives the building a solid appearance and belies the fact that every space is light-filled with views in all directions.

At Ohio State University, Mack Scogin Merrill Elam's new KNOWLTON HALL brings the design process to the larger academic community



By Sara Hart

Last fall, the new Knowlton School of Architecture (KSA) at Ohio State University (OSU) opened its doors to 550 undergraduate and graduate students, matriculated in three design fields—architecture, landscape architecture, and city and regional planning. The importance of this event cannot be overstated. The architecture school finally got the state-of-the-art facility that a high-profile, innovative program deserves.

The process was arduous and ambitious. Atlanta-based firm Mack Scogin Merrill Elam Architects survived the short-list judging to win the commission and was then instrumental in selecting Wandel & Schnell Architects (now WSA Studio) as its local collaborators. When the team was assembled, the challenges came into focus. The original budget couldn't accommodate the school's goals. The university initially settled for renovating the existing school and building a major addition, which would bring the three disciplines together for the first time in decades. The architects dutifully obliged with a scheme that worked well enough, but it would have produced merely an expensive compromise that would only be adequate for another 10 or so years.

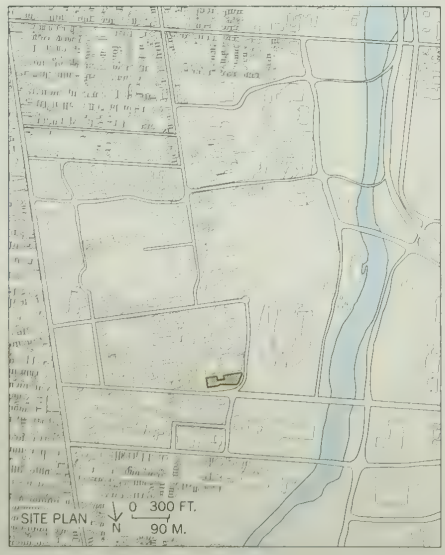
So they went back to the proverbial drawing board, fortified with more money from the major donor—real estate developer and alumnus Austin E. Knowlton—and designed a 135,000-square-foot structure that consumed the entire site, which was necessary in order to absorb a hefty program—45 studios, 65 offices, computer labs, an archive, a 30,000-volume library, a 200-seat auditorium, and a state-of-the-art model shop with CNC machines for model fabrication.

The site, on the northwestern edge of the old campus, is architecturally eclectic, to say the least. Its most celebrated neighbor is the football stadium. Home to the nationally prominent OSU Buckeyes, it looms large to the west, just beyond its yawning parking lot. Across the other busy avenue to the north, the Fisher Business School occupies an earnest, vaguely Postmodern redbrick complex. Secondary borders are formed by coarse concrete parking garages to the south and low-rise laboratory buildings to the east. This edge is traversed by a major pedestrian thoroughfare that brings students close to the architecture school—a collateral benefit to the overall strategy.

Mack Scogin Merrill Elam approached this project understand-

Project: *The Austin E. Knowlton School of Architecture, Columbus, Ohio*
Client: *The Ohio State University*
Architect: *Mack Scogin Merrill Elam Architects—Mack Scogin, AIA, Merrill Elam, AIA, partners; David Yocum, AIA, project architect; Brian Bell, AIA, John Trefry, Penn Ruderman, Barnum Tiller, Cecila Tham, Jeffrey Collins, Kevin Gotsch, Margaret Fletcher, design team*
Architect of record: *Wandel & Schnell Architects—Robert Wandel, AIA, partner; Cissy Wong, AIA, project architect; Alan Sulser, Ivan Amy, Lannetta Vader, Yanitza Brongers Kristen Poldemann, design team*
Consultants: *Lantz, Jones & Nebraska (structural); HAWA Consulting Engineers (m/e/p); Bird & Bull (civil); Wiss, Janney, Elstner (rain screen)*
Landscape architect: *Michael Van Valkenburgh Associates*
General contractor: *P.J. Dick*





The architecture school (shown in yellow at left) is sited on the northwestern edge of the old campus. This location is dramatically anchored by the OSU Buckeyes' football stadium. The building's logic is revealed by circumnavigation. The architects carved slots out of the mass to bring in natural light and create outdoor spaces. The major donor gave five enormous Classical columns to weigh heavily on one of the public spaces (right and opposite).



ing that the OSU architecture school had a mission beyond giving form to a well-respected architecture program. Robert Livesey, director of the school, wanted an open atmosphere with spaces, including the auditorium, available for use by other programs within the university. Most architecture schools don't invite the casual visitor into their cloistered confines. Unlike other disciplines, architecture generally offers instruction via the studio system—a vibrant, stressful construct that is disorderly without being disorganized. Knowlton Hall was intentionally conceived to flaunt that distinction, while simultaneously and purposefully creating a transparent environment in which the design process was constantly on view. "We wanted to make the building a model for the Knowlton School students and the university," explains Livesey. "We wanted to show them the impact that architecture could have."

Principal Mack Scogin admits that he packed the section. As a matter of fact, the plan, by contrast, is deceptively ordinary—orthogonal and judicious. Form and function collide in the section. The primary, ceremonial procession through the building follows gently inclined ramps. It offers views in multiple directions, which appear and disappear along the way through translucent layers or openings in the unfinished poured-in-place concrete walls and floors. Discrete spaces are formed, not so much by walls, but by solids and voids, level changes, staircases and columns, and ascending and descending ceilings. Each space is illuminated from multiple sources—skylights, clerestory windows, spotlights, and custom fluorescent light boxes.

One is tempted to invoke Piranesi when describing such complexity, but this comparison, if taken literally, suggests disorientation. Nothing could be farther from the truth. Knowlton Hall is a lucid building. The architects focused on slicing and shearing the longitudinal section until the spaces resonated. This is what Scogin calls the "critical imperative." He acknowledges that they resisted any inclination to create an iconic object—one that might separate the architecture school stylistically from the rest of the campus, but perhaps forfeit its potential to inspire from within.

And yet, there is a another reason why the architects turned inward. Rare is the commission that doesn't include odd requirements. In the case of the KSA project, the architects had to address the major donor's insistence on white marble cladding. Despite its association with permanence, marble is not a durable material, especially when applied as a thin veneer. It requires a lot of maintenance due to its susceptibility to environmental degradation. The architects offered several alternatives, but the donor remained adamant regarding the marble, even though there was no such precedent on the OSU campus. The solution was ingenious. The building is protected, hidden actually, by a rain screen, which is independent of the curtain wall that actually defines the envelope. The screen is composed of marble shingles beveled so they overlap and clip together without any caulked joints. In the event of breakage, a shingle can be easily replaced. The overall effect is an illusion of impenetrability, when the truth is just the opposite.

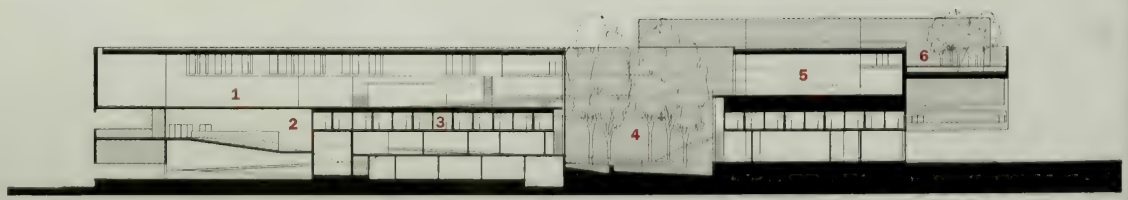
The university elected Michael Van Valkenburgh to landscape the perimeter. However, since the building absorbed most of the site, there was little left to landscape. "Michael had to grab the edges of the site," explains Scogin. Indeed, Van Valkenburgh took what land was available and com-



1. *Planning studios*
2. *Auditorium*
3. *Faculty offices*
4. *South court*
5. *Gallery*
6. *Roof garden*
7. *Studios*



SECTION A-A



SECTION B-B

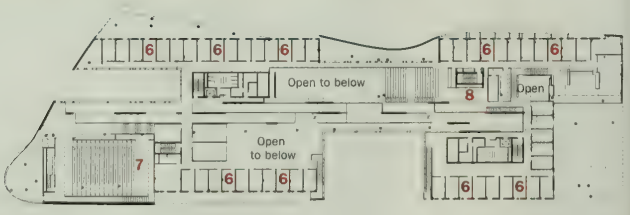


The largest of the many slots that penetrate the building encloses the south court on three sides (opposite). While dramatic, the curtain wall is in reality an inexpensive storefront system. Studios occupy a variety of spaces with views up and down into other studios, while light trickles in from all directions (right).



A strut supporting lighting (left and opposite, bottom) runs diagonally on the first level, linking the jury spaces on the south to those on the north (achieving in plan what the ramps do in section). It also follows one of the diagonal lines of the structural columns. The library (opposite, top) is a two-story volume with a mezzanine that can be reached either from the lower level or across bridges.

1. *Forecourt*
2. *South court*
3. *Jury space and lecture rooms*
4. *Center space*
5. *Gallery*
6. *Faculty offices*
7. *Auditorium*
8. *Jury space*
9. *Computer labs*
10. *Planning studios*



SECOND FLOOR



GROUND FLOOR



FOURTH FLOOR

N 0 30 FT. 9 M.





posed a prelude to the internal experience with berms and ramps, which stand in elegant contrast to the flat hardscape of neighboring buildings. Within the exterior slots created by the building, ramps turn and rise from the sidewalk until they reach the entrance.

As commissions for building types go, the design of a high-profile, multitasking architecture school must be the most intimidating assignment for an architect, whose name will be forever attached to it. There are several architecture schools in the U.S. with impressive pedigrees, and even they aren't immune from persistent criticism. After all, the designer may have a single client, but he or she has as many critics as there are students and professors in residence. Knowlton Hall should raise the bar for architecture and campus development for the next generation. At the end of the day, it's the students who benefit most, and that's the true mark of success. ■

Sources

Rain screen: *Vermont marble*
Metal-and-glass curtain wall: *YKK and Centria*
Built-up coal tar roofing: *Kalreuth Roofing & Sheetmetal*
Posttensioning: *P.T. Systems*
Glazing: *PPG Solarban 60*
Skylights: *Naturalite Skylight Systems*
Elevators: *Thyssenkrupp Elevator*

For more information on this project, go to Projects at **www.architecturalrecord.com.**



A seemingly random pattern of windows and grills on the south facade is actually based on a repeating module over a six-part grid (this page). The physicists' offices look onto the serene southern shore of Silver Lake (opposite).

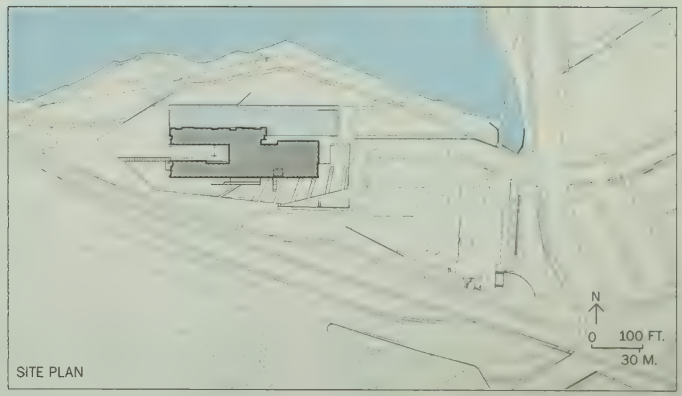
At the **PERIMETER INSTITUTE** in Ontario, **Saucier + Perrotte Architectes** pair darkness and light to celebrate the mysteries of physics



By Rhys Phillips

Twenty-five years ago, the corner of Caroline Street and Father David Bauer Drive in the small Ontario city of Waterloo was a jumble of old industrial buildings, vacant land, and railway tracks coexisting uncomfortably along the southern edge of Waterloo Park's Silver Lake. In the mid-1980s, architect Barton Myers skillfully transformed a number of 19th-century brick distilleries into the Seagram Museum, which quickly became an icon of Canadian Postmodernism and initiated a metamorphosis of the area. The museum whetted the city's interest in signature architecture, and a major competition for the Canadian Glass and Clay Gallery soon followed; the winning project by Patkau Architects opened in 1995 to critical praise. Last year's opening of the Perimeter Institute for Theoretical Physics, by Saucier + Perrotte Architectes, marks the third major architectural addition to this once-frayed boundary of Waterloo's modest commercial core. This remarkably expressive building both responds to its intriguing site and captures the institute's very raison d'etre in built form.

Rhys Phillips has been writing about Canadian architecture for more than two decades. In 2003, he was made an honorary fellow of the Royal Architectural Society of Canada.



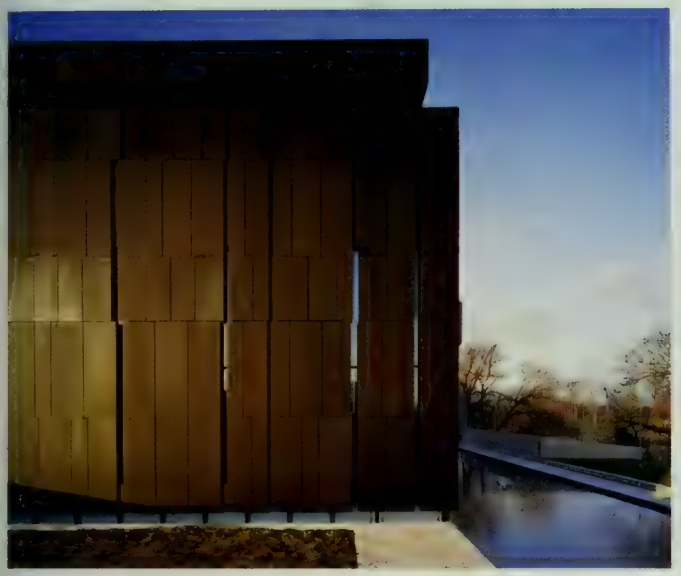
SITE PLAN

Project: *Perimeter Institute for Theoretical Physics, Waterloo, Ontario, Canada*
Architect: *Saucier + Perrotte Architectes—Gilles Saucier, prinpical in charge; André Perrotte, project architect*
Engineers: *Blackwell Engineering (structural); Crossey Engineering (m/e/p); Stantec Consulting (civil); Acoustics Engineering (acoustics)*
General contractor: *Eastern Construction*



The office bays, articulated in the vertical plane to form a unique ensemble of spaces, rest on a base of concrete supports extending from the main structure (this page).





The ambiguity of the city facade (left) was inspired, Saucier says, by the mysterious nature of physics. Black metal panels wrap the lecture hall at the east end of the building (below left). At night, the institute shimmers in reflected light (below).

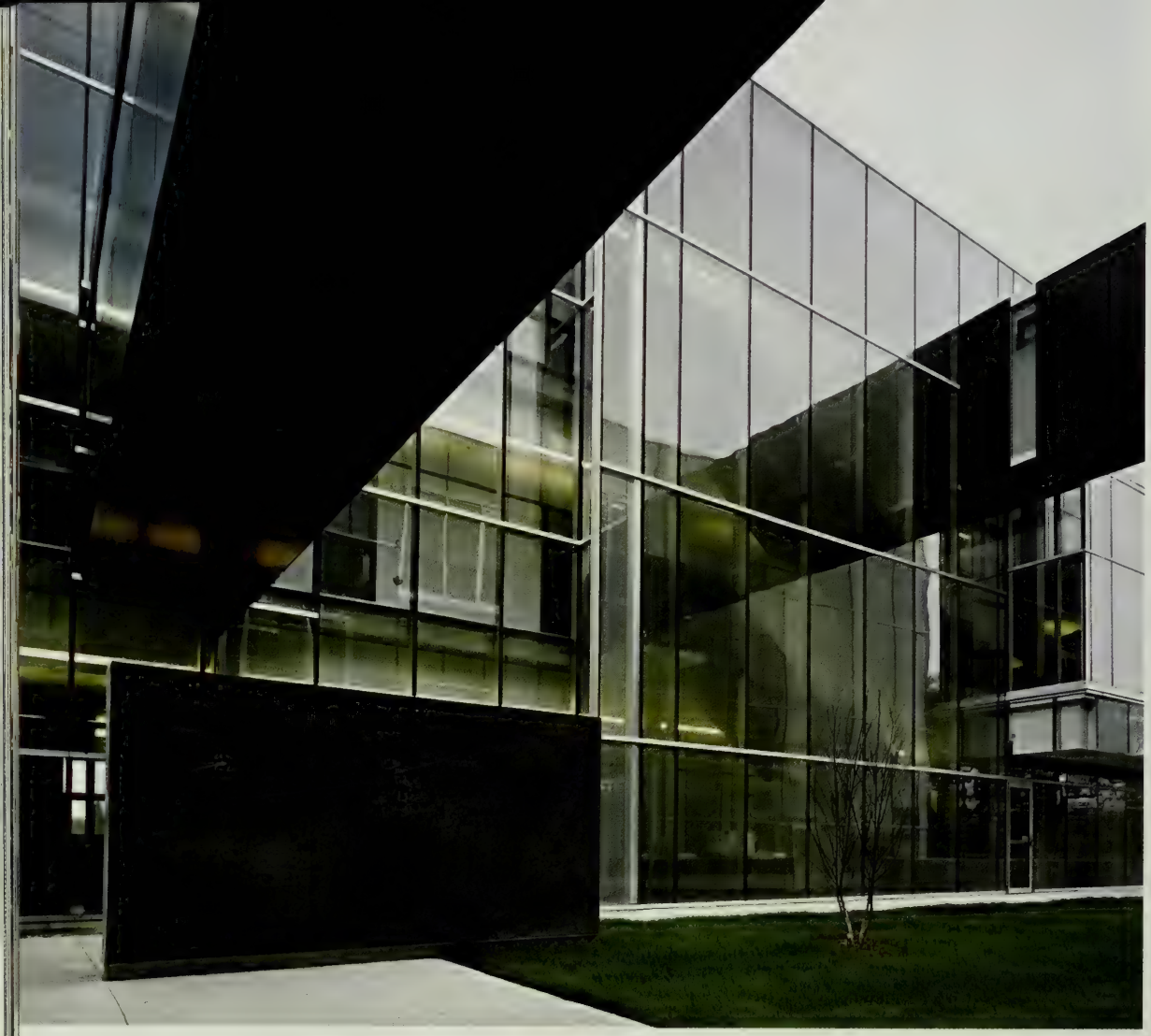


Established in 1999 by Mike Lazaridis, founder of the successful high-tech firm Research in Motion, the Perimeter Institute is a private, not-for-profit think tank that works with 28 Canadian universities to attract scientists who study cutting-edge topics in quantum physics. The client, seeking a unique building that would help lure top scholars, obtained a list of five firms recommended by the University of Toronto's school of architecture. Though the institute planned to conduct a two-stage competition of interviews followed by design submissions, they hired Saucier + Perrotte promptly after the firm's interview, pleased with its approach to the program and site.

Principal Giles Saucier recognized that Perimeter needed an ensemble of spaces that enabled both solitary creativity and group synergy. "Researchers require places of splendid isolation," he says, "but also comfortable places to make contact, both formally and informally." Such a dichotomy also exists at the building's site, which sits between the quiet realm of the lake and park and a more active sphere of urban movement. Saucier wanted the scientists to be engaged with both of these external worlds, as well as with each other.

Early in the design process, Saucier attended a lecture—largely incomprehensible to him, he laughingly notes—that explored the complex synaptic connections within the brain. As he listened, he drew the lines of this connection, which in the building became physical representations of changing perceptions. But landscaping came first. The institute is built on top of an old waste-disposal site, so the architects couldn't excavate a foundation. "We started by drawing a single line representing the division between the site's two worlds," says Saucier. This line was then extrapolated to create what Saucier calls "an erupting ground plane," where the earth appears to have been peeled back, forming a landscaped berm on the north portion of the site and a grass-topped podium on the south side. These forms are defined further by raw, imposing concrete walls. Along the lakeside to the north, the wall holds back the berm and shelters a large reflecting pool and terrace, while from the cityside, visitors must penetrate the powerful wall and podium to reach the south entrance.

Into the trench formed by the berm and podium the architects placed a concrete-framed structure on a pad at grade: two slim, parallel office and administration wings, fully glazed along their facing facades and connected at the east end by a perforated black metal box that appears to float on a first story of highly transparent glass. Through this glass, a 205-seat lecture hall, elegant in its rich simplicity, is visible. A glass-roofed atrium, filled with northern light, sits between the office wings and the lecture hall. At the mezzanine level, the atrium opens onto



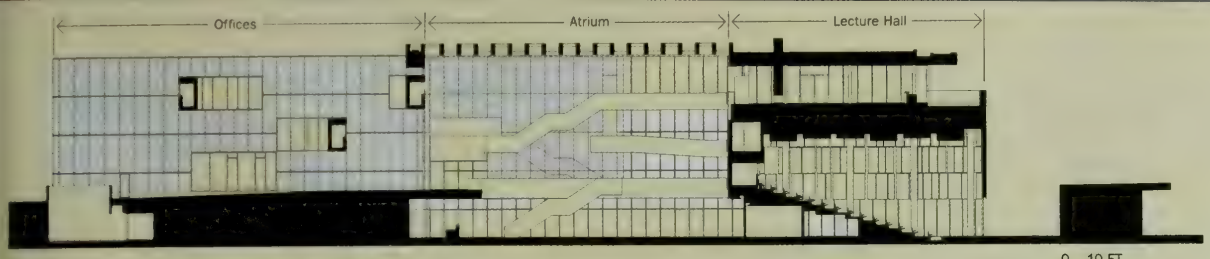
The courtyard that separates the physicists' offices wing from the administrative wing (left) is spanned by footbridges that encourage casual interaction and emphasize exterior views of the lake and the city. The north entry sequence along the lecture hall and reflecting pool provides a contemplative path into a building designed for big thinkers (below left).



a grassy courtyard and reflecting pool, giving the space a piazzalike feel.

The building's south elevation, a three-level facade clad in anodized aluminum and punched and dented with a pattern of windows and highly polished stainless-steel mechanical grills, presents the city with an abstracted image that reflects the enigmatic world of physics itself, yet is open enough to invite exploration. Three slightly extruded boxes mark interior passages that become bridges spanning the courtyard, eventually emerging out the north elevation. The bridges emphasize a telescopic contact with the landscapes to the north and south, and also serve as informal spaces for conversation. The north facade on the park, which stands in contrast to the institute's city face, comprises a transparent series of extruded zinc-and-glass boxes containing private offices for the physicists. These offices were kept simple, quiet, and unadorned, with one side wall of concrete and the opposite wall a floor-to-ceiling blackboard.

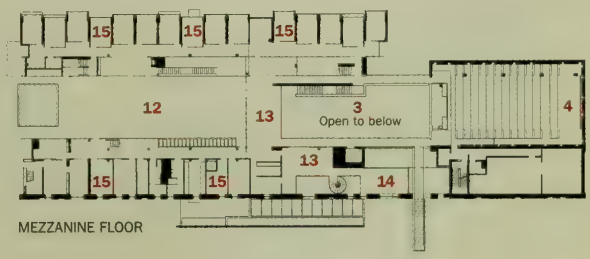
Like science itself, the building's layers open up to reveal relationships that might seem obscure from a distance. Interior spaces are remarkably lucid, and the circulation provides a continual interplay of visual connections with the city, park, and lake, as well as within the building itself. Cool, crisp materials—such as clear, fritted, and reflective glass, as well as metal and concrete—are warmed with touches of rich

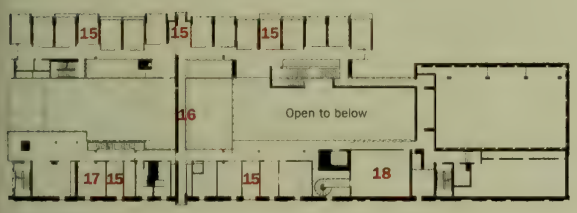


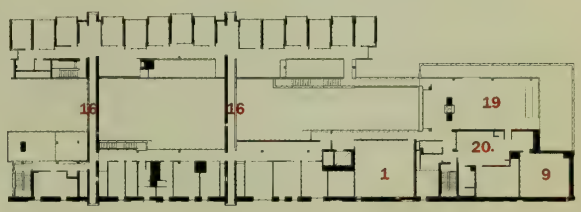
SECTION A-A

1. *Parking*
2. *Entry*
3. *Central atrium*
4. *Lecture hall*
5. *Library*
6. *Lounge*
7. *Gym*
8. *Changing rooms*
9. *Mechanical*
10. *Loading dock*
11. *Storage*
12. *Courtyard*
13. *Mezzanine*
14. *Reading room*
15. *Office*
16. *Footbridge*
17. *Meeting room*
18. *Seminar room*
19. *Café*
20. *Kitchen*

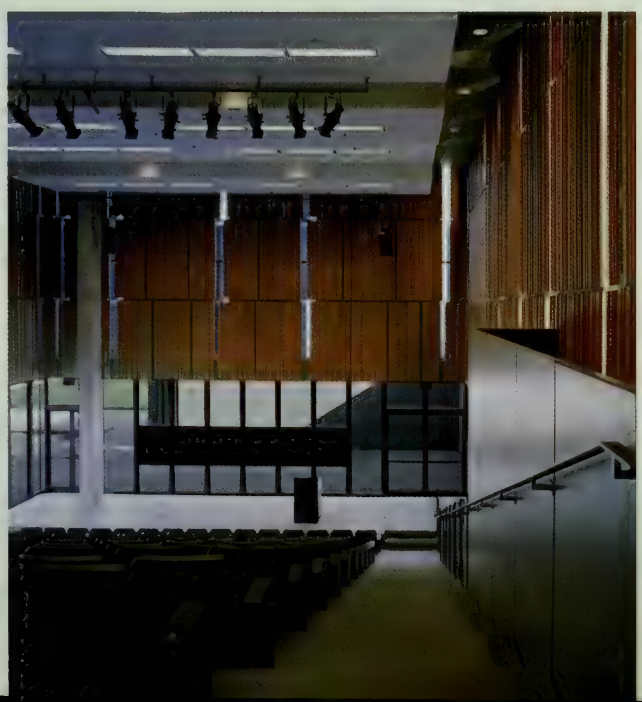


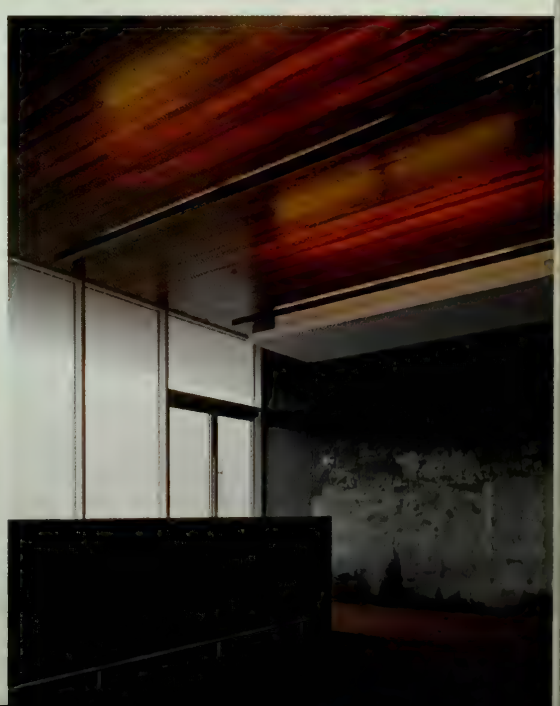






The institute's scholars gather frequently in the high-ceilinged lecture hall (near right), where layers of wood improve the acoustics and warm the walls of concrete and glass. Each physicist's office has a floor-to-ceiling blackboard for scribbling notes and working through proofs and theories (far right).









wood, such as white oak and Brazilian ibe.

If there's a weakness to be found, it's with the entry sequences. The stark simplicity of the south entry, and its immersion in deep shadow, are intended to provoke a sense of mystery and hence public curiosity. Unfortunately, this approach is virtually lost to the urban context because of the railroad tracks that cut off the building from the street. Therefore, most people enter into the atrium on the north side. The walk to this entry is a sensory delight, taking one through the berm and past the glazed lecture hall and reflecting pool. But the parking lot from which it originates is a rude interjection between the institute and the finely articulated west facade of the neighboring Glass and Clay Gallery.

Despite these drawbacks, the Perimeter Institute succeeds in its mission. It's not only a protected space for high-level thinking; its adroit siting and provocative juxtaposition of materials promote dialogue, both within its walls and with the public, about a world few of us readily grasp. ■

Sources

Metal/glass curtain wall: *Fulwal; VM Zinc; Ontario Panelization; Merit Glass; Roof Tile Management*
Aluminum windows: *Fulton*
Glazing: *Trulite: Viracon; Prelco*
Skylights: *IBG Canada*
Auditorium seating: *Irwin*

For more information on this project, go to Projects at **www.architecturalrecord.com**.



A series of zigguratlike concrete stairs appear to float against the opalescent glazing along the corridors of the office wings (opposite, top and bottom). An assemblage of black metal panels form another focal point in the atrium, like an abstract work of art (this page).





Akin to a landform, the RiverQuarium's massing evokes the region's Kolomoki burial mounds (this page and opposite). The external materials include concrete and blocks of rough-hewn limestone.

After torrential floods, Albany, Georgia, reinvents itself with a centerpiece by Antoine **Predock**: a **RIVERQUARIUM** celebrating local aquatic culture

By Sarah Amelar



"The site's at one of those weird crossroads where Smalltown, U.S.A., meets a powerful natural system," says architect Antoine Predock, FAIA, of his recently completed Flint RiverQuarium, a building that mediates between the city of Albany, Georgia, and the abundant water flowing through it. The curious juxtaposition of modest urbanism with undisturbed aquatic ecology has played an essential role in this town of not quite 100,000 people, 85 miles north of Tallahassee, Florida—even as the relationship between municipality and river fluctuated over time.

An asset and occasionally a source of ruin, the Flint River originally attracted the area's native Creek Indians, who settled along its banks. In 1836, the same 350-mile-long water course inspired Nelson Tift to launch a river freight business here, founding the city, which he named after the then-bustling trade center of Albany, New York. But low water and sandbars ultimately impeded steamboat navigation, and by the turn of the last century, this southwestern Georgia town had switched its cargo traffic from river to rail. Though years later such heavy-hitting companies as Proctor & Gamble, M & M/Mars, and Merck set up manufacturing centers in the small city (and still operate there), the river remained largely ignored, escaping the abuse suffered by so many other waterways. Then, in 1994, a disastrous 500-year flood, and in 1998, a torrential 100-year flood, surged into Albany, turning local attention back toward the Flint.

"Our future is riding on the river," reads the slogan for the downtown revitalization campaign that emerged in the wake of the great deluges. With ambitions to reroute streets and create parks, trails, housing, a conference center, a hotel, museums, historic sites, and more, the master planners felt they needed a "magnet or signature building to make Albany a destination," says Thomas Chatmon, Jr., president and C.E.O. of Albany Tomorrow, Inc. (ATI), the public-private enterprise overseeing this urban revival. "But what sort of building would be authentic and really about us? A place about the river itself," he concluded, envisioning a nature center focused on local aquatic ecosystems. With $15 million (later reaching $26.8 million) in state funds for the RiverQuarium's design and construction, ATI promised to create a center that would never draw on public funds for its operation and survival.

A search for an architect of international stature led to New Mexico–based Predock, who had previously designed nature centers, though not aquariums per se. "Antoine came to the initial interview with just a wealth of information about the hydrology, geology, ecology, archaeology, history, and especially the Native American culture of this area," recalls Chatmon. "It blew us away."

Predock promptly secured the commission and embarked on further explorations of the river and its surroundings, some of which led to the region's Kolomoki burial mounds and Blue Holes. Kolomoki mounds, the archaeological remains of local tribes, would inspire the building's external form, drawing on what the architect describes reverentially as "big, mute landforms rising from the ground."

Blue Holes, a natural phenomenon of southeastern Georgia and northern Florida, would also profoundly influence the concept of RiverQuarium that Predock and his collaborator, Boston-based exhibition designer Frank Zaremba, AIA, of Lyons/Zaremba, formulated. A Blue Hole develops when an underground limestone substrate collapses, allowing aquifers, or subterranean springs, to well up and fill the large cavity. At a constant temperature of 68 degrees Fahrenheit, typically cooler than the surrounding air, the collected water creates a microclimate for aquatic and plant life. Many aquifers lie beneath Albany, feeding its farm crops and manufacturing plants. But the visible aquifers, the Blue Holes, are what inspired the sacred Creek Indian idea of "skywater,"

Project: *Flint RiverQuarium, Albany, Georgia*
Architect: *Antoine Predock Architect—Antoine Predock, FAIA, design principal; Sam Sterling, AIA, executive senior associate; Geoffrey Beebe, AIA, senior associate; Stuart Blakely, associate*
Exhibit design: *Lyons/Zaremba*
Architect of record: *RBK Architects*



A curtain wall with structural glass fins instead of mullions permits unbroken views out from the Skywater room and stair (this page) to the Blue Hole and river beyond.









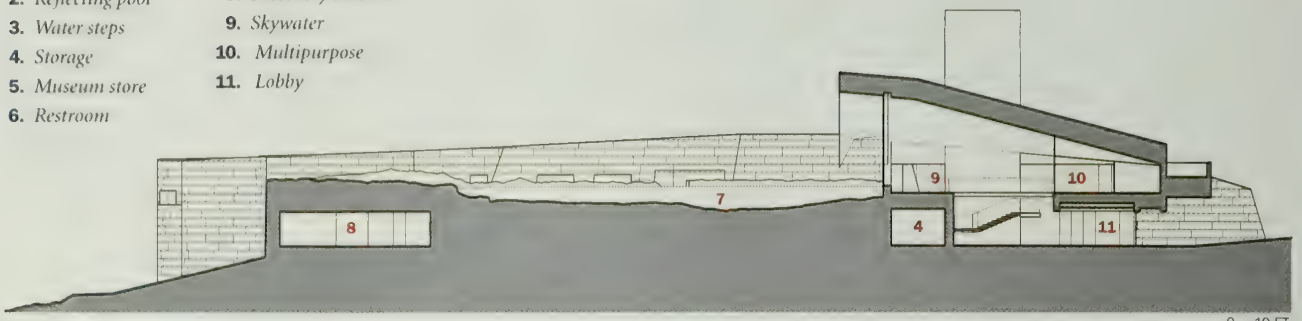
SECOND FLOOR



FIRST FLOOR

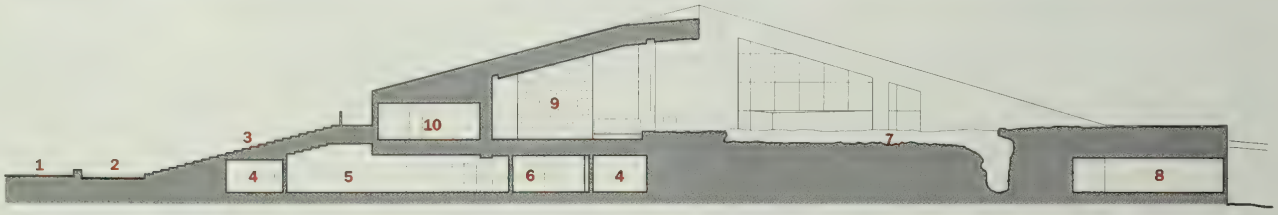
1. *Walkway to river*
2. *Blue Hole*
3. *Curatorial*
4. *Reflecting pool*
5. *Lobby*
6. *Water steps*
7. *Skywater*
8. *Blue Hole aperture*
9. *Multipurpose*
10. *Terrace*
11. *Flint River gallery*
12. *Blue Hole ramp*
13. *Ticketing*
14. *Audiovisual*
15. *View deck*
16. *Amphitheater*
17. *Mechanical*
18. *Loading dock*
19. *World of Water gallery*
20. *Museum store*
21. *Restrooms*
22. *Discovery caverns*
23. *Storage*
24. *Blue Hole life support*

1. *Plaza*
2. *Reflecting pool*
3. *Water steps*
4. *Storage*
5. *Museum store*
6. *Restroom*
7. *Blue Hole*
8. *Discovery caverns*
9. *Skywater*
10. *Multipurpose*
11. *Lobby*



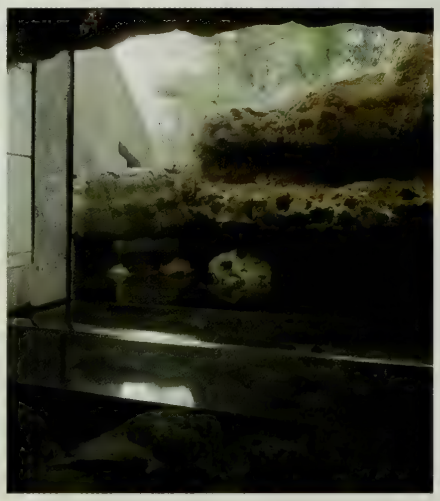
SECTION A-A

0 10 FT.
3 M.



SECTION B-B





Ramps and stairs threading through the RiverQuarium lend the journey sectional complexity, yielding views of the Blue Hole from various levels and vantage points, including underwater (near left) and above the pool (opposite and far left). Convincingly naturalistic, the man-made Blue Hole was planted with live vegetation that undergoes cycles of seasonal change.

describing the natural pools that appear blue, as if capturing a piece of the sky. The concept captured Predock's imagination.

With no Blue Hole on his riverfront site and the threat of floods making it technically impractical to route the Flint through the building, the architect created a 12,000-square-foot artificial Blue Hole at the center of his structure—as if the RiverQuarium had risen around an untamed condition.

"To shield the inner experience of water [at the heart of the building], I thought of the exterior as an almost blank, yet mute and powerful, wrapper," says Predock. From outside, the structure's windowless triangulated forms rise toward its center, recalling an ancient burial mound. On one side, water flows over a run of stairs, creating a gently inclined waterfall. Outer walls of cast concrete and stepped ramparts of massive limestone blocks—rough, as if cut directly from the riverbed—enclose the structure, revealing just a hint of the Blue Hole: tall trees poking above the roofline.

At first glance, the RiverQuarium's massing, with its convergence of triangular volumes, bears a striking, almost déjà-vu resemblance to some of Predock's earlier public structures, including the Tang Museum in Saratoga, New York [RECORD, May 2001, page 224], and the Spencer Theater in Ruidoso, New Mexico [RECORD, May 1998, page 152]. The architect attributes any apparent similarities to his affinity with Mayan ruins and other mound cultures of North America—to his a fascination with "tilted planes as displaced land and a trajectory connecting earth and sky." But, he asserts, each of these buildings has a unique relationship to its site: Whereas the Tang provides horizontal vectors, drawing together disparate parts of a college campus, and the Spencer echoes the form of the mountains behind it, the RiverQuarium "hunkers down into the earth and gazes out toward the river."

Partially burrowed into the site, the 38,000-square-foot interior offers a strong sectional experience of descent, a journey that actually begins with an ascent to the chapel-like Skywater room. Completely free of interior exhibits, this generous space focuses visitors' attention outdoors on the reflective surface of the Blue Hole (filled with 175,000 gallons of water) with its live vegetation that changes seasonally, and the river beyond it. The building, an irregular U, embraces its Blue Hole, which lies open to the sky. The eye takes in the man-made body of water and the larger natu-



ral one as a continuum. A structural-glass curtain wall—with clear glass fins rather than mullions—allows for uninterrupted views.

After seeing the Blue Hole from above, visitors continue down the interior's main path, a circle with ramps descending below the water level. Here, through glazing, the water appears as a lens to the sky, visually merging aquatic and heavenly realms. The underwater habitat reveals an array of fish, plant life, amphibians, insects, and reptiles (including alligators). "Instead of making a box with aquarium windows," says Predock of his work with Zarimba, "we wanted to engage the public spatially with the exhibit." The passage through the dimly lit interior leads through a cavern and fish hatchery (with some exhibits achieving more spatial, interactive, and experiential qualities than others). Finally, the circle ascends back to Skywater.

The exhibits are already a big hit with children, many of whom press their faces against the glass. From the building's exterior, the waterfall, steps, and ramping planes—all evoking a landform—also invite their participation (but the museum administrators, perhaps fearful of liability, have sprinkled the structure's perimeter with "No Climbing" and "Keep Off" signs). Parents and teachers appear, pulling back toddlers as they gleefully reach for the water. The temptation would have been even greater if value engineering had not eliminated the canted water wall (beside the water stair) and sod roof (or field in the sky) that the architect had originally planned. But surely enough remains of the overall intent to excite young visitors.

As the town continues to realize its master plan—including a park honoring Albany native Ray Charles—the RiverQuarium evolves as a work in progress. Its adjacent aviary and riverview amphitheater, both outdoors and designed by Predock, are yet to come. Rooted in a private endowment now exceeding $4 million, the Blue Hole already grows thick with vegetation that evolves with the seasons—all set to bloom in vivid color each spring. ■

Sources

Structural glass curtain wall: *Innovative Structural Glass*

Water steps: *Hall Fountains*

For more information on this project, go to Projects at **www.architecturalrecord.com.**

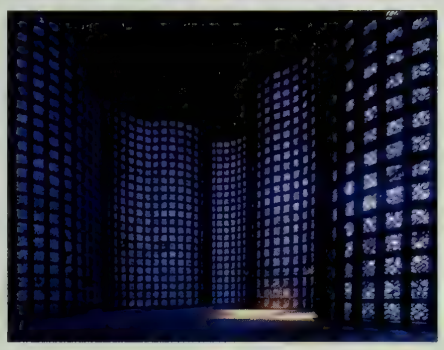


Polshek's new expansion to Harrison & Abramovitz's undulating concrete-paneled Hall of Science (opposite, top and bottom) juts out to the north (below). A drum attached to the rear of the wedge-shaped hall (above) seems to float over the glazed ground floor.

Polshek Partnership's expansion brings vitality and new life to the **HALL OF SCIENCE**, in a 1964 World's Fair building, in Queens, New York

By Suzanne Stephens





It's not easy to make something exciting out of leftovers. Especially unappetizing are some of the architectural remains from the New York 1964 World's Fair in Flushing Meadows-Corona Park, Queens. The few buildings that were constructed on a permanent basis have been moldering for the past 40 years, as if waiting for Disney. Now at least the Hall of Science, designed by Wallace Harrison of Harrison & Abramovitz, has been turned into architectural haute cuisine with a spirited expansion by Polshek Partnership.

Although Wallace Harrison had famously designed the futuristic Trylon and Perisphere for the 1939 World's Fair on the same site, his 1964 structure received negligible attention. The problem may have been due to the lack of critical acclaim for the World's Fair in general: Under the leadership of the indomitable planner, Robert Moses (nicknamed "Fair Fuhrer"), the 1964 exposition lacked the innovative aura of its predecessor. Yet the Hall of Science—structurally and spatially—was unique, owing to its 80-foot-high undulating wall of tan poured-in-place concrete coffers. Moreover, the 5,400 coffers are filled with hand-faceted shards of cobalt blue glass held in a concrete matrix. The interior of the free-formed cellular concrete space of the Great Hall, as it is called, glows eerily, much like a cathedral designed by August Perret. This serpentine tower, now used for temporary video exhibitions, rises from a hexagonal base where permanent science exhibits are displayed within the articulated, muscular spaces of the exposed poured-in-place-concrete structure.

In its quest to bring the Hall of Science into the 21st century, New York City's Department of Design and Construction, working with Hall of Science director Alan Friedman, hired Polshek Partnership to expand its display, service, and administrative spaces for $55 million. Just a few years back, in 1996, Beyer Blinder Belle had already added a main entrance rotunda and an egg-shaped auditorium to the original structure.

The approach that Polshek's design partner Todd Schliemann adopted was to play up the opposing characteristics of the Great Hall and what Polshek dubbed its "Hall of Light." Whereas Harrison's vertical, undulating, opaque concrete wall looms sinuously over the immediate skyline, Polshek's 55,000-square-foot expansion features an angular wing shooting out horizontally some 55 feet to the north. While the walls of the Great Hall are dense and dark, with blue translucent panes, the Polshek wing, a wedge wrapped in lightweight translucent fiberglass panels, is perched atop a clear, glazed base. The Harrison structure, opaque from without, glows mysteriously inside during the day; Polshek's interior, brazenly light by day, glows phosphorescently at night. Harrison's space is abstract and scaleless; the Polshek wing, with its complement of variously sized Modernist elements, imparts a sense of human scale. As if deferring to the circular forms of Beyer Blinder Belle's entry portion, Polshek designed a two-story, stuccoed-wallboard drum to the rear of its complex. Housing temporary exhibitions, this windowless gallery rests on a clear glass base reserved for offices.

Since the Hall of Science is geared primarily to school children and families, Friedman wanted to make sure that the building would not overwhelm its visitors. He had seen Polshek's acclaimed Rose Planetarium at the American Museum of Natural History in New York but didn't want such a grand, awe-inspiring space in his Queens science center: Harrison's Great Hall, which is used for temporary exhibitions, did that. The new addition should show that "science was not strange and fearful." But, he notes, "The building should be exciting, technologically innovative, and draw us into it."

Project: *Hall of Science, Queens, N.Y.*
Architect: *Polshek Partnership—Todd H. Schliemann, design partner; Joseph L.Fleischer, management partner; Don Weinreich, project manager; V. Guy Maxwell, project architect*
Owner: *N.Y.C. Department of Design and Construction; Department of Cultural Affairs; New York Hall of Science*
Engineers: *Leslie E. Robertson Associates (structural); Flack + Kurtz (m/e/p, fire, security); El Taller Colaborativo (civil); Langan Engineering and Environmental Services (geotechnical, environmental)*



Curvilinear stairs with perforated-steel balustrades encourage the visual and physical link between old and new spaces. Visitors approach the stair and mezzanine (left) from the old core, now called the Central Pavilion. The lower floor of the Central Pavilion is linked to this area via a new steel-and-concrete spiral stair (below).

Stitching together Harrison's bold base and tower with Beyer Blinder Belle's circumspect entry piece and Polshek's energetic expansion was not easy. The Polshek-designed lobby stretches from the Beyer Blinder Belle rotunda to the new gallery, allowing visitors several routes of entry: via the rotunda and the old, windowless hexagonal exhibition space underneath the Great Hall, or straight on to the Polshek wing. For those entering the wing through the hexagonal space, Polshek inserted a steel-and-concrete spiral stair that connects this subterranean area to a new mezzanine from which the visitors are drawn by another arcing stair up to the main gallery on the second floor. As Schliemann explains, "We want to choreograph the movement upward and outward, from dark to light."

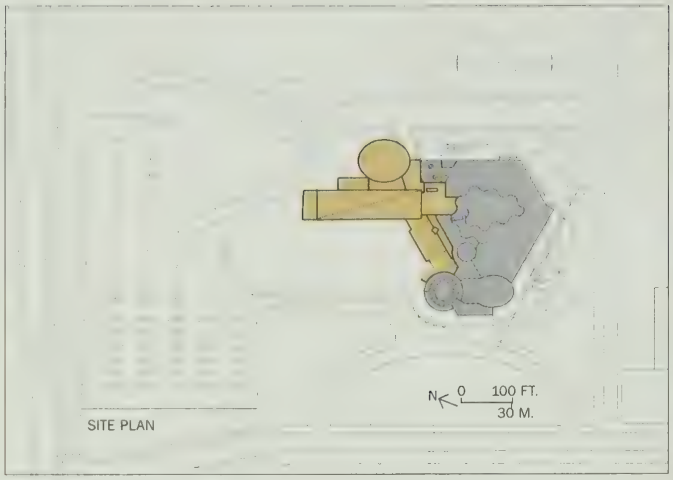
The structure of the new wedge-shaped hall "explores the morphology of force and form," says Schliemann, referring to the compressive and tensile forces of the 11 trusses that dominate the hall's basic armature. The king-post trusses follow a staggered formation to create a ridgeline running diagonally from the southeast corner of the roof to the northwest one at the hall's far end. The steel skeletal structure of beams, vertical posts, and steel tension cables creates an animated space: The walls, with flared steel columns tilted at an obtuse angle to the floor and diagonal steel cables to keep the structure from racking, further bolster the dynamism of the whole. Wrapping the roof and walls of this frame is a light, translucent, fiberglass skin. The cells of the Kalwall system, with insulation between the membranous sheets, rely on an internal aluminum grid for stiffness. In turn, they form panels about 5 feet wide and about 11 feet high, which are attached to battens to create the building envelope. "We have taken a material that is typically used as infill and turned it into a skin wrapping the walls and the roof," says Guy Maxwell, the project architect.

Within this vigorously engineered space, visitors, usually of school age, interact with the various science exhibits and often receive extemporaneous instruction from student volunteers. At the far end of the gallery, a sitting area under a large glass installation by James Carpenter leads to another stair and the first level of exhibits, plus the Science Access Center, or library.

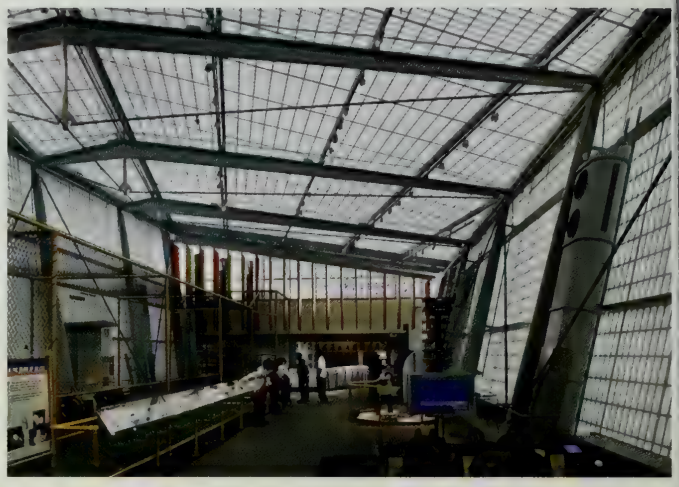




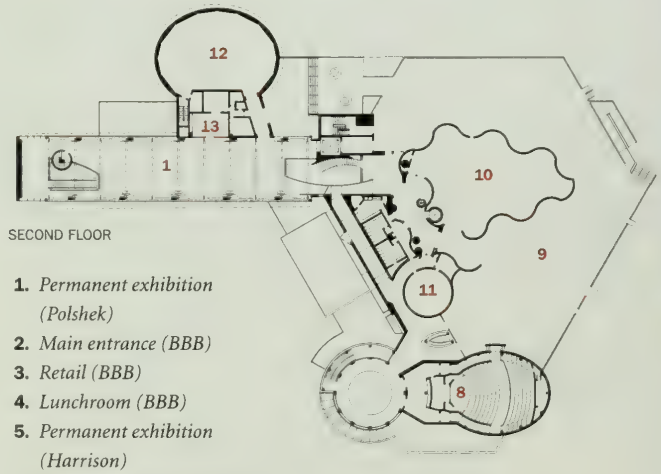
From the ground floor of the new wing, visitors can take the stair to Harrison's Great Hall or proceed straight ahead to the mezzanine overlooking the permanent gallery underneath.



SITE PLAN

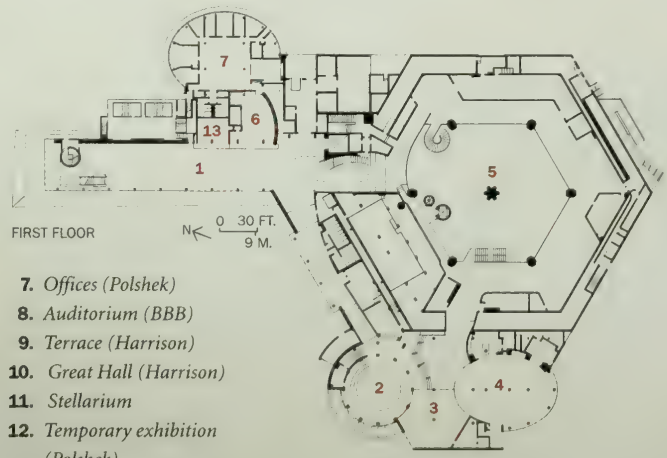


The upper level of the new wing (top right) features a series of staggered king-post trusses designed with a diagonal ridgeline that moves from one corner of the wedge to the opposite corner at the far end (diagram, right).



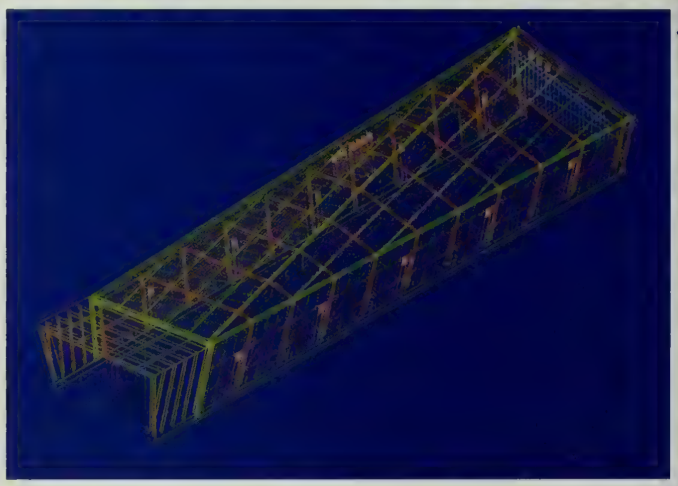
SECOND FLOOR

1. *Permanent exhibition (Polshek)*
2. *Main entrance (BBB)*
3. *Retail (BBB)*
4. *Lunchroom (BBB)*
5. *Permanent exhibition (Harrison)*
6. *Science Access Center (Polshek)*



FIRST FLOOR

7. *Offices (Polshek)*
8. *Auditorium (BBB)*
9. *Terrace (Harrison)*
10. *Great Hall (Harrison)*
11. *Stellarium*
12. *Temporary exhibition (Polshek)*
13. *Discovery Lab (Polshek)*



Judging from the extraordinary response of the young audience, the open laboratory concept seems to communicate the accessibility of science amazingly well. Friedman notes that he particularly likes the visual connections the architects established from space to space and level to level. The knitting of the old and the new sections of the science center appears to function smoothly, although the circulation path established in entering the building through the Beyer Blinder Belle portion now seems a bit circuitous. This brings up another problem: While the Polshek contribution succeeds especially well as an expressive architectural statement about how to add onto the Harrison building, Beyer Blinder Belle's architecture doesn't quite fit into the new mix. Its presence remains troubling, whereas the imaginative balance of opposites between Harrison's and Polshek's efforts—both based on walls of "cells": one organic, concrete, and dense; the other, angular, translucent, and lightweight—maintains a spirited architectural dialogue. The Polshek Partnership has taken the leftovers from Harrison's almost-forgotten scheme for the World's Fair and infused them with an élan that allows the identities of both to remain intact, even if the entire ensemble doesn't quite hang together. ■

Sources

Fiberglass sandwich panels for wall and roof: *Kallwall*

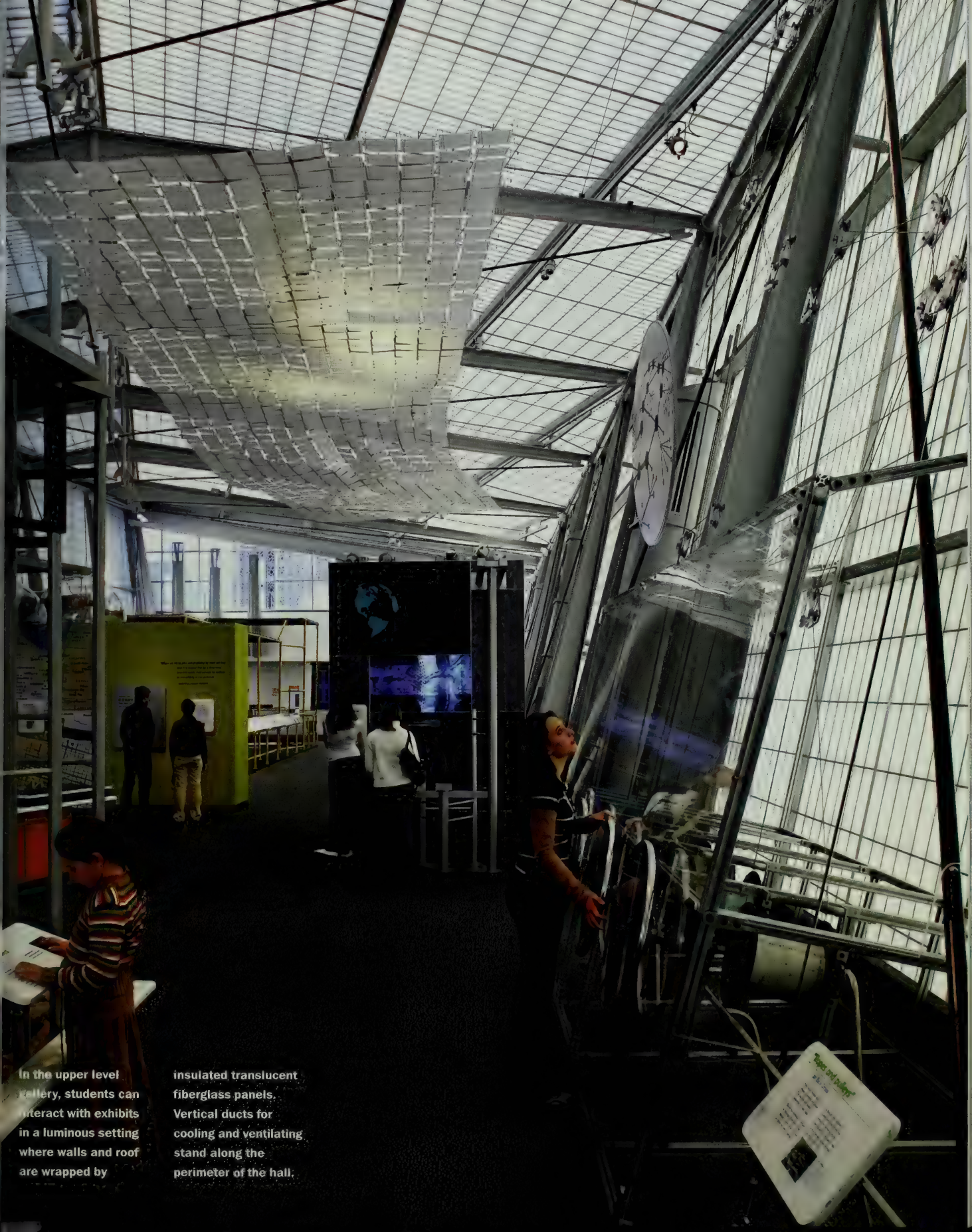
Curtain-wall and storefront systems: *EFCO Corporation*

Glass: *Viracon*

Roofing: *Johns Mansville*

Metal ceilings: *Hunter Douglas*

For more information on this project, go to Projects at **www.architecturalrecord.com**.



In the upper level gallery, students can interact with exhibits in a luminous setting where walls and roof are wrapped by insulated translucent fiberglass panels. Vertical ducts for cooling and ventilating stand along the perimeter of the hall.

TO EVERY DESIGN, THERE IS TERRAZZO



THE SYMBOL OF QUALITY
THE NATIONAL TERRAZZO & MOSAIC ASS'N., INC.
INCORPORATED 1921
NEW JERSEY
FOR FINE TERRAZZO PATRONIZE OUR MEMBERS

Terrazzo is highly praised throughout the flooring industry for its durable nature and cost-effective lifecycle. Choosing to work with terrazzo opens an infinite number of design opportunities and the diverse color palette will truly inspire all.
Terrazzo — a floor that truly performs!

Contact us at: 1.800.323.9736

or visit us at: WWW.NTMA.COM

Terrazzo
A PERFORMING ART

Job Name: Episcopal Church of the Transfiguration
Location: Dallas, Texas
Architect: Good, Fulton, & Farrell Architects

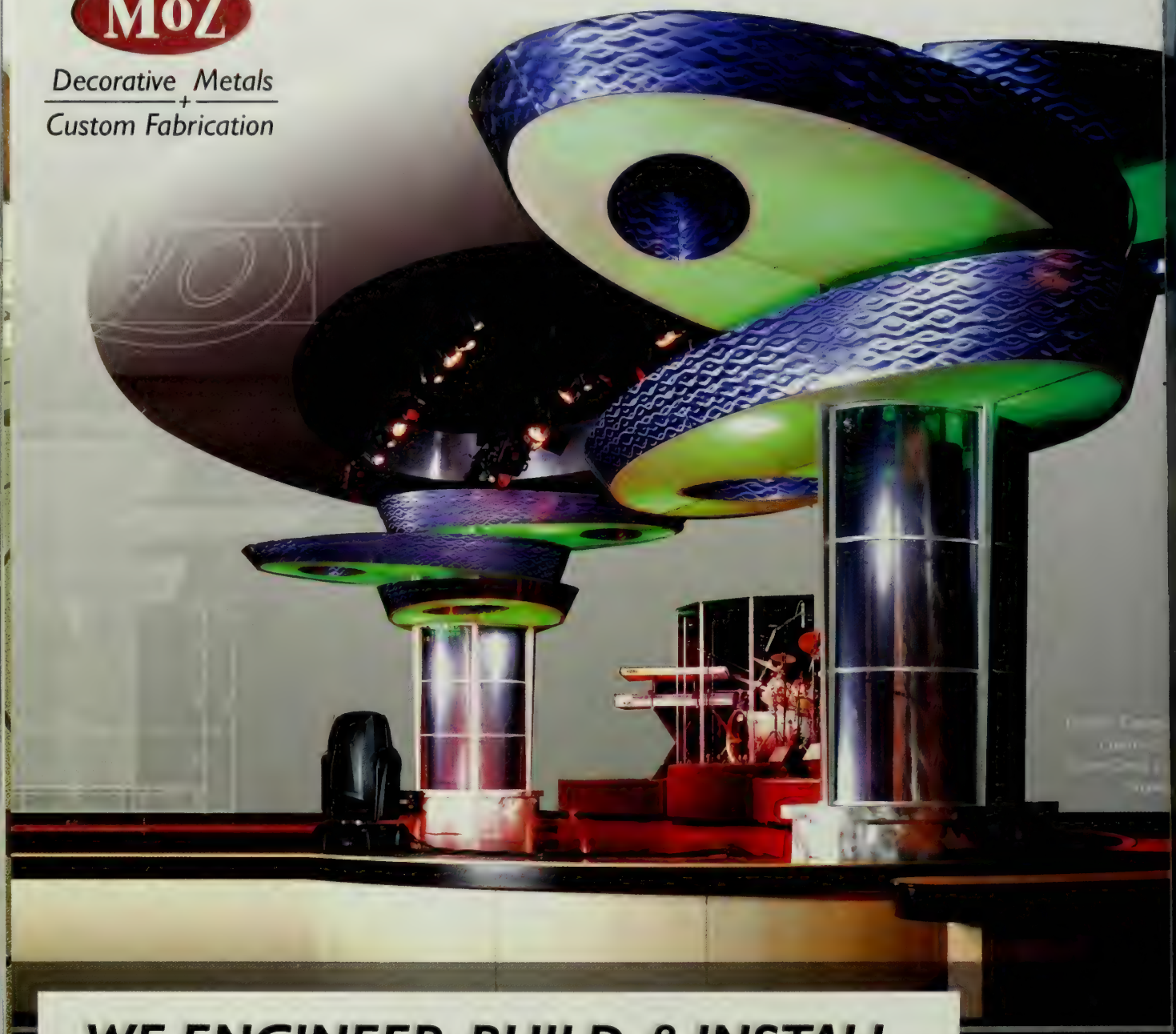
CIRCLE 108 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



LIGHTSPACE™, A DIVISION OF BOYD LIGHTING
944 FOLSOM STREET SAN FRANCISCO CALIFORNIA 94107 TEL 800.276.2693 FAX 415.778.4319 WWW.LIGHTSPACEBYBOYD.COM

MóZ

Decorative + Metals
Custom Fabrication



WE ENGINEER, BUILD & INSTALL







column covers
wall panels
ceiling panels
canopies
signage
fixtures
art

Oakland, CA 510.632.0853 **www.mozdesigns.com**



When you stand out people notice. In this case for the right reasons. Choose a MonierLifetile roof for your project and you're choosing a product that distinguishes you from the competition. Not only because we have beautiful styles and colors that complement virtually any architectural design, but also because tile is the most durable roofing material available. Which means your houses are more attractive—both visually and intellectually—to potential homebuyers. So let us amaze you. Learn more about tile by calling 1-800-571-TILE (8453) ext. 239.

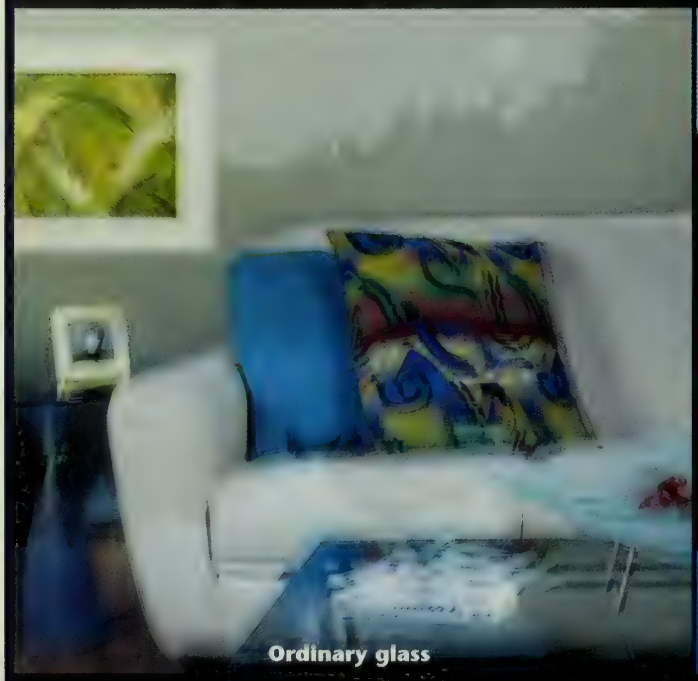
1-800-571-TILE (8453) ext. 239
www.monierlifetile.com

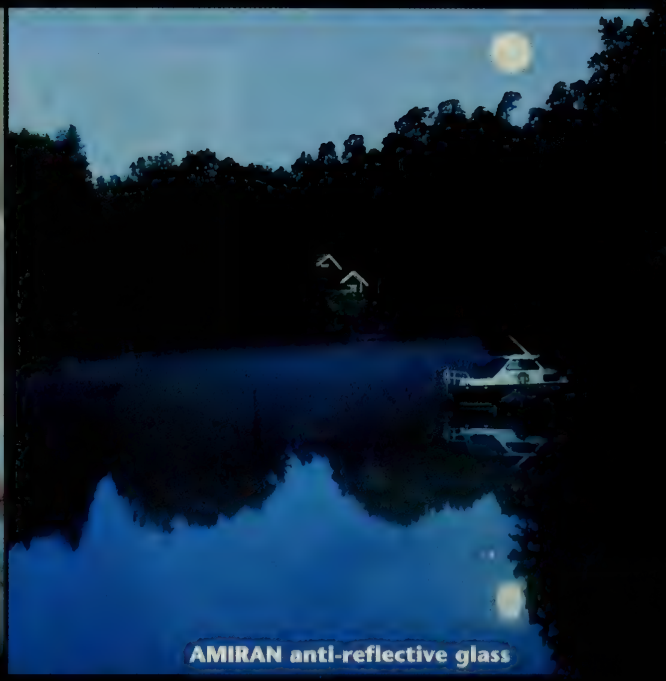
MonierLifetile™
Changing the way people think about roofs.

CIRCLE 110 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

SCHOTT North America, Inc.

Reflections are the way life used to be.


Ordinary glass


AMIRAN anti-reflective glass

Amiran® anti-reflective glass gives your residential clients remarkably clear nighttime views.

The sun goes down. The lights go on. The view is still magnificent. Because the anti-reflective glass used in storefronts, sports stadiums and museums around the world is now available for your residential projects. Amiran anti-reflective glass reduces glare in insulated glass to as little as 2% — even at night. Amiran glass can be installed in any frame or glazing system you would use for ordinary windows and can be laminated and tempered for safety. It's so effective that some upscale communities, Lake Tahoe for instance, have adapted construction guidelines to suggest the use of anti-reflective glass in all new homes. Of course, Amiran can be used when retrofitting too. Stop by the Schott website at www.us.schott.com/tgd or call 914-831-2241. And reflect on the way life is going to be with Amiran anti-reflective glass.

SCHOTT
glass made of ideas

©2003 SCHOTT North America, Inc.
®Amiran is a registered trademark of Schott Glas, Mainz, Germany.

CIRCLE 111 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Divine Intervention

AT A TIME WHEN POLITICIANS ARE DEBATING THE ROLE OF FAITH AND RELIGION IN PUBLIC LIFE, ARCHITECTS ARE CREATING SPACES THAT SPEAK WITH A UNIVERSAL SPIRIT.

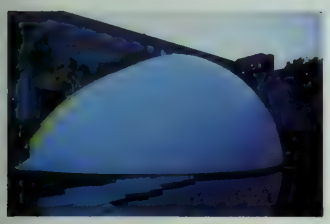
By Clifford A. Pearson



1.

New Brighton, Minnesota

Hammel, Green and Abrahamson inserted a glass-and-stone chapel into a seminary campus so that it both inspires and fits in.



2.

Kobuchizawa, Japan

At a Japanese resort, a wedding chapel by Klein-Dytham Architecture explores the area where popular culture meets religion.



3.

St. Amant, Louisiana

Trahan Architects turned poured concrete into an austere but sensual material at a small complex of religious and education buildings.



4.

Seaside, Florida

Using vernacular building systems and simple materials, Merrill and Pastor created a civic landmark where people of all faiths can pray.

What makes a place sacred? Iconography offers one solution: Affix a cross or a Star of David to a building and it becomes a church or a synagogue. Devotion provides another: Lay down a prayer rug, face Mecca, and even a sidewalk can be transformed into a place of worship. But architecture can go beyond the ad hoc to create more permanent responses to the challenge of imbuing buildings with a spiritual dimension. Time seems to be a critical element in both the architectural program and the many schemes that have been proposed and built since people began praying. Indeed, the intersection of the timelessness of faith and the transitory nature of our lives on Earth provides the emotional tension that drives the best examples of religious architecture.

Making the metaphysical visible or physical is the key task facing architects designing religious buildings. Although materials and methods have changed greatly from one period and civilization to another, architects have had only two basic strategies at their disposal: defiance and allusion. A giant stone pyramid designed to last forever (or as close as possible) is an example of the first, while a stained-glass window that colors light as it enters a cathedral is an example of the latter. Some religious buildings combine both approaches; just think of Le Corbusier's chapel at Ronchamp with its impressive, thick walls and the ephemeral, ever-changing light that animates the spaces within. At Ise in Japan, Shintoism alludes to temporality by requiring that the main shrine be rebuilt every 20 years. In this way, architecture becomes ritual, which can remain timeless as long as it is practiced.

The projects included in this month's Building Types Study exhibit a range of approaches to making the physical spiritual. At the Bigelow Chapel in Minnesota, Hammel, Green and Abrahamson orchestrated a quiet symphony of light that floods the sanctuary. At the Holy Rosary Catholic Church in St. Amant, Louisiana, Trahan Architects skillfully manipulated the relationship between solid and void to allude to the essential mystery of faith. In the vacation town of Seaside, Florida, Merrill and Pastor used vernacular forms, but stripped them of all explicit iconography to create a sacred space for people of all beliefs. At a resort in Japan, Klein-Dytham Architecture treated one half of a wedding chapel's shell as a perforated metal veil, then set it in motion to add an element of drama and a bit of fun to a formal occasion.

All the projects, though, take a restrained approach to form and space, understanding that simple is often more powerful than complex when it comes to expressing what is sacred. ■

For more information on these projects, go to Projects at **www.architecturalrecord.com**.

Bigelow Chapel
New Brighton, Minnesota

HAMMEL, GREEN AND ABRAHAMSON MODULATE SCALE AND LIGHT TO CREATE A GLOWING CHAPEL ON THE CAMPUS OF A MIDWESTERN SEMINARY.

By Camille LeFevre

Architect and engineer: *Hammel, Green and Abrahamson—Gary Reetz, AIA, principal in charge; Joan Soranno, AIA, design principal; John Cook, AIA, project architect; Tony Staeger, structural engineer; Lance Kempf, mechanical engineer; Terry Tangedahl, electrical engineer; Steven Dwyer, design team*
Client: *United Theological Seminary*
Consultants: *Coen + Partners (landscaping); Schuler Shook (lighting); Kirkegaard Associates (acoustical)*
General contractor: *M.A. Mortenson Company*

Size: *5,300 square feet*
Cost: *Withheld*

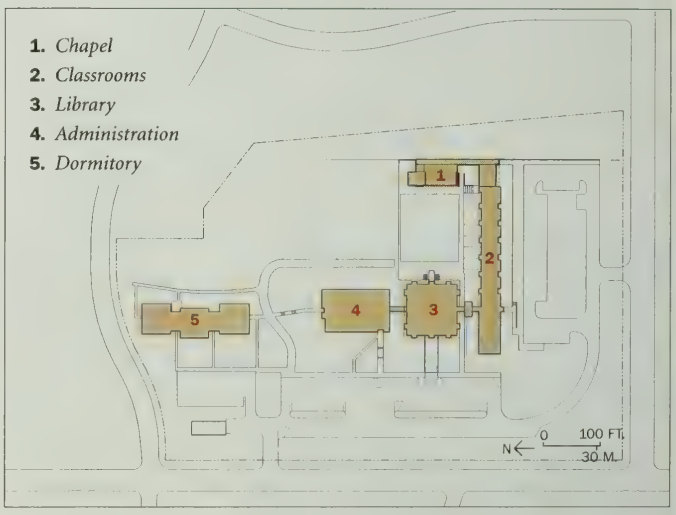
Sources
Precast concrete: *Artstone*
Stainless-steel curtain wall and skylights: *Mero Structures*
Aluminum windows and doors: *HKL Cladding Systems*
Millwork and liturgical furniture: *Wilkie Sanderson*
Chapel chairs: *ICF Group*
Ambient lighting: *Uovo; Fontana Arte*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Respecting the subdued context while adding an inspiring place of worship was the challenge facing the architects of the Bigelow Chapel at the United Theological Seminary of the Twin Cities in New Brighton, Minnesota. For 44 years, the seminary—a Christian-based, ecumenical graduate and professional school whose 225 students come from a variety of faiths—had occupied simple, Modern buildings made of buff-colored brick and precast concrete. In the spirit of Midwestern frugality, a multipurpose room served as the seminary's chapel. But when a former student and board member donated $1 million for a chapel, the school took advantage of the opportunity to add a new kind of experience, not just more space. "We wanted the building to suggest a spiritual invitation to worship," says Wilson Yates, president of the seminary. "It really had to do with the creation of sacred space."

To create a sacred space that didn't overwhelm its quiet, 11-acre-campus setting, Joan Soranno, AIA, a design principal at Hammel, Green and Abrahamson (HGA), manipulated scale and light. "In traditional religious spaces like synagogues, Gothic cathedrals, and mosques, the scale is monumental, with the darkness generating intimacy," explains Soranno. Bigelow Chapel, which she designed with her HGA colleagues John Cook, AIA, and Steven Dwyer, is the inverse. "Here, we made the scale smaller but flooded the sanctuary with light."

Camille LeFevre writes about architecture for publications such as Metropolis *and* Architecture Minnesota.



Program

The seminary requested a building with a flexible sanctuary able to accommodate seating in a variety of configurations, along with a narthex (vestibule) and offices. The new chapel needed to connect to an existing classroom building and architecturally address a library across the lawn to the west, two modest structures erected in 1962.

The real challenge set forth by the seminary, however, was a spiritual one. The sanctuary, as the focus of the building, had to be accessible—iconographically and aesthetically—to the seminary's multidenominational community. "We wanted a chapel that would convey the transcendence, mystery, and power of God," says Yates.

Solution

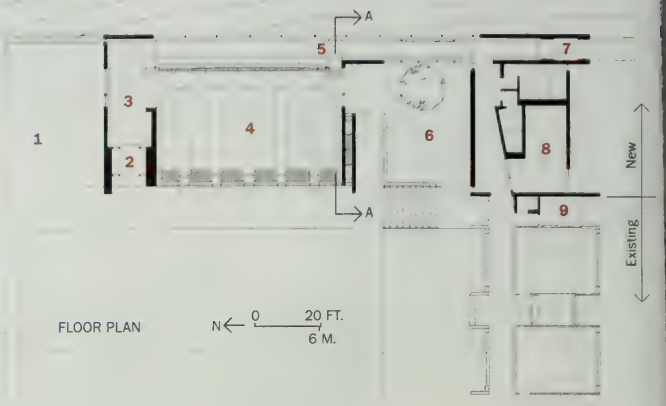
Rather than thinking in terms of a Christian worship space, says Soranno, she began designing a 2,200-square-foot sanctuary by considering "what makes a place spiritual." She arrived at a trinity of qualities: intimacy, warmth, and light. She and her team conveyed the first two characteristics through six translucent, quilted-maple panels that ripple up and down the interior of the sanctuary's west-facing, glass-and-stainless-steel curtain wall. Maple floors and rectangular





A processional hall that runs the length of the building provides a main entry on the south end of the site (above). The sanctuary looks onto the west garden (left) and toward the existing library.





1. *North garden*
2. *West entry*
3. *Narthex*
4. *Sanctuary*
5. *Processional hall*
6. *Meditation garden*
7. *South entry*
8. *Mechanical*
9. *Office*

The architects used stones from a quarry in Italy as prototypes for casting concrete panels used on the south end (above) and north side (right) of the building. A cantilevered roof seems to float above the narthex and the north garden, one of three outdoor spaces that tie the building to its site.



quilted-maple panels that extend into the sanctuary from the ceiling of a long processional hall on the east side of the building reinforce the sense of peaceful enclosure.

"The maple has to do with the sense of warmth," Soranno explains, "while the curving panels create an intimate, nurturing environment in which to worship and pray." As sunlight passes from the curtain wall through translucent, acrylic-encased panels, it blends with and enriches the interior light. Daylight also enters the sanctuary through clerestory windows along the east wall and skylights, "which were critical," Soranno says. "For many people, that notion of light coming in from above evokes a sense of divine presence."

But because many people also "think of God as being manifested most beautifully in nature," Soranno created two windows in the sanctuary that frame landscaped views. The south one overlooks a meditation garden and its lone musclewood tree, while the north one borders a single white oak.

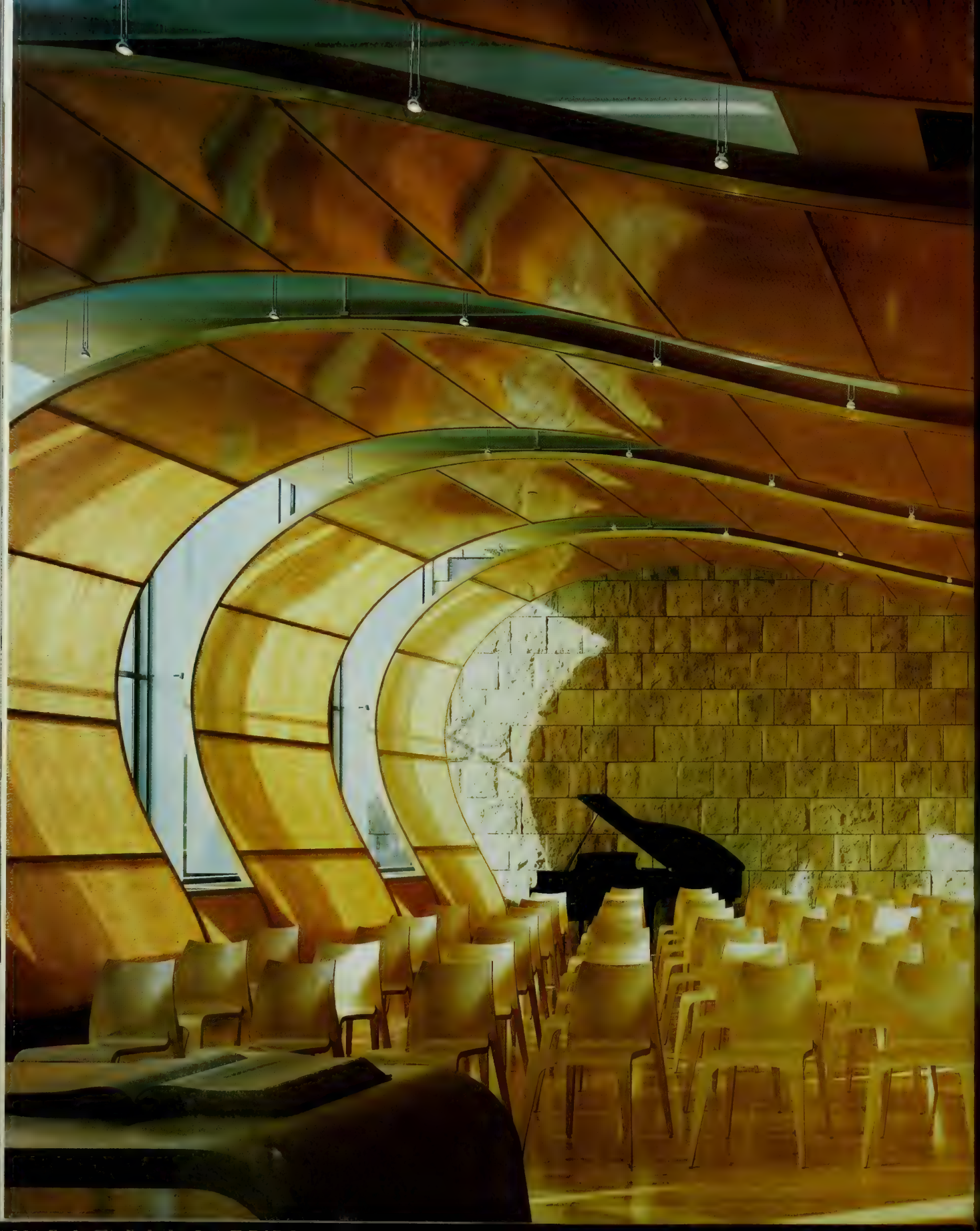
The architects kept the sanctuary column-free by using tapered beams secured through innovative moment connections to roof girders that transfer the bulk of the gravity load to the east wall, rather than the curtain wall on the west. Tiny stainless-steel mullions in the curtain wall act as invisible "columns."

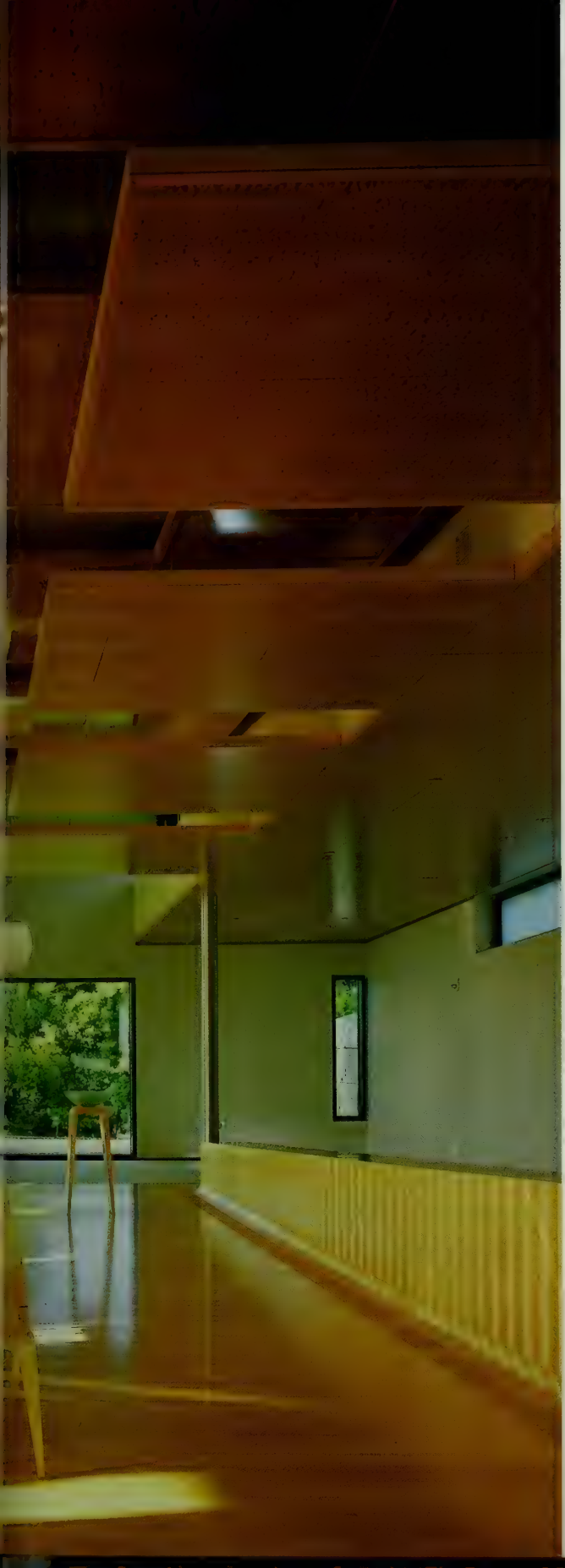
Glass fins on the curtain wall project both inside and out, screening and diffusing light entering the sanctuary. Similar to buttresses that march through a Gothic cathedral, the fins and the curved maple panels create a rhythmic pattern with a meditative quality, says Soranno. The fins also introduce a planar quality of weightlessness that is repeated in several other "floating" forms, such as a stone-trimmed roof that hovers above and beyond the narthex on the west side of the building. This roof appears to be a 29-foot-long cantilever, but it is actually supported near its center by slender stainless-steel pipe posts secured to a lower roof.

A 42-foot-high bell tower at the south end of the sanctuary provides a strong vertical note to a building whose forms are predominantly horizontal. Two stone walls placed 2 feet apart and slightly offset from one another define the tower and echo the rhythm of the paired glass fins that run along the length of the sanctuary's curtain wall.

Initially, Soranno considered

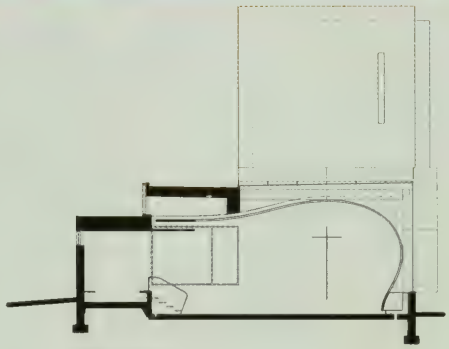

The meditation garden between the chapel and the existing classroom building is paved with black slate and a solitary mesquite tree.







Quilted-maple ribbons wrap around the inside of the sanctuary (above and left), modulating light and adding a dynamic quality to the space. Soranno designed the maple table, lectern, pulpit, and baptismal font, while the maple chairs were bought.



SECTION A-A

using Italian travertine for the bell tower and the north and south walls of the sanctuary. Instead, the design team ordered 50 pieces of the stone from an Italian quarry and kept 39 to use in the cladding and as prototypes for manufacturing 4,000 precast-concrete panels that look like stone.

To visually secure the 5,300-square-foot building to its site, the architects placed it 4 feet lower than the classroom building it connects to on the south and the library it faces on the west. A trio of gardens serve as transitional spaces between the chapel and its neighbors: a meditation garden adjacent to the classroom building, a small outdoor room on the north, and a lawn extending to the library.

A long stone-clad processional hall extends the entire building length, starting at the south entrance, running along one side of the meditation garden, and ending at the narthex on the north end of the site. Sloping toward the sanctuary, the hall serves as a stately but dynamic axis to the entire architectural composition.

Commentary

Using daylight, space, and a sophisticated palette of materials, the architectural team rose to the challenge of creating a building that is spiritual, timeless, and welcoming to people of all faiths. ■

Leaf Chapel
Kobuchizawa, Japan

2 **KLEIN-DYTHAM ARCHITECTURE SETS A WALL OF A WEDDING CHAPEL IN MOTION AT A RESORT IN THE JAPANESE ALPS.**

By Clifford A. Pearson

Architect: *Klein-Dytham Architecture—Astrid Klein, Mark Dytham, Yoshinori Nishimura, Yukinari Hisayama, project team*
Executive architect: *Hoshino Resort Architects—Shozo Miyawaki*
Client: *Risonare Resort*
Landscape designer: *Studio On Site—Hiroki Hasegawa, Chisa Toda, Kazutaka Tanbe*
Lighting designer: *Ice—Masanobu Takeishi, Michiru Tanaka*
Engineers: *Arup Japan—Tatsuo Kiuchi, Yuji Kusawake, Keiko Katsumoto (structural); Tetens Engineering—Yutaka Murase, Ryoichi Teshigawara (mechanical, electrical)*
General contractor: *Rinkai Nissan Kensetsu—Hiroki Kanno, Fumihiko Kobayashi, Chiaki Kobayashi*

Size: *550 square feet*
Cost: *Withheld*

Sources
Hydraulic rams: *Kawasaki Heavy Industries*
Glass-roof film: *Lintec*
Polycarbonate lens cap: *Kyoraku*
Fabric scrim: *Taiyo Kogyo*
Furniture: *Waazwiz*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Theatrics have always played an important role in church architecture. Soaring naves, mysterious lighting, and bold murals have helped fill pews for hundreds of years. Now Klein-Dytham Architecture has taken this strategy into the 21st century, using its own form of stagecraft to add drama to a small wedding chapel in the Japanese Alps. Because the 550-square-foot chapel sits in the garden of a resort hotel and is as much a business as a sacred space, architects Astrid Klein and Mark Dytham could take liberties that might not be appropriate for other religious buildings. Their client, after all, was a businessman who owns hotels and a brewery, not a church leader or congregation. "He knew we are media-savvy and would design something that would attract attention in the magazines," says Dytham.

Program

Part of the sprawling Risonare resort (designed by Mario Bellini during the economic bubble of the 1980s), the chapel needed to have its own identity and at least the semblance of spirituality. But because people of many different faiths would get married there, it needed an ecumenical design with no iconography associated with any particular religion or sect.

Instead of accommodating a specific liturgical program, Klein-Dytham had to design a chapel that would orchestrate a procession of experiences in a manner both efficient and memorable. Given an attractive garden setting, the architects decided to make nature an important theme of their design.



Solution

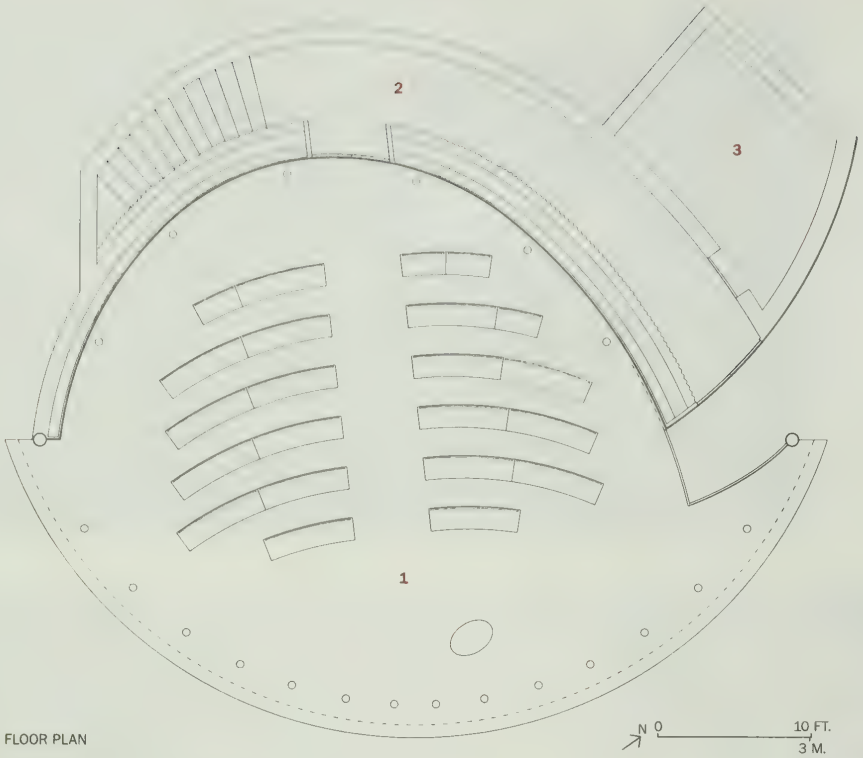
After the client mentioned the idea of a pergola in an early meeting, Klein and Dytham started exploring designs structured like a pair of leaves. At first they thought about making both leaves out of glass, but soon realized a backdrop offering views of the rolling garden would prove distracting to guests during the wedding ceremony. So they developed one leaf as a veil, a perforated metal surface that would allow light in but block views.

With this notion in mind, the architects decided to translate into built form the climactic moment of every wedding—when the groom raises the bride's veil and kisses her. Using quarter-inch-thick steel panels welded together and attached to a tubular steel frame, Klein-Dytham created a curving wall that slides up and out of the way just as the new-

After the groom kisses the bride, the chapel's perforated-steel "veil" rises (opposite) to let the couple and their guests move to the garden for a toast and photographs (right). The architects used a freehand drawing of ivy, based on henna patterns featured in Indian wedding ceremonies, for the acrylic lenses set into the steel shell (below).



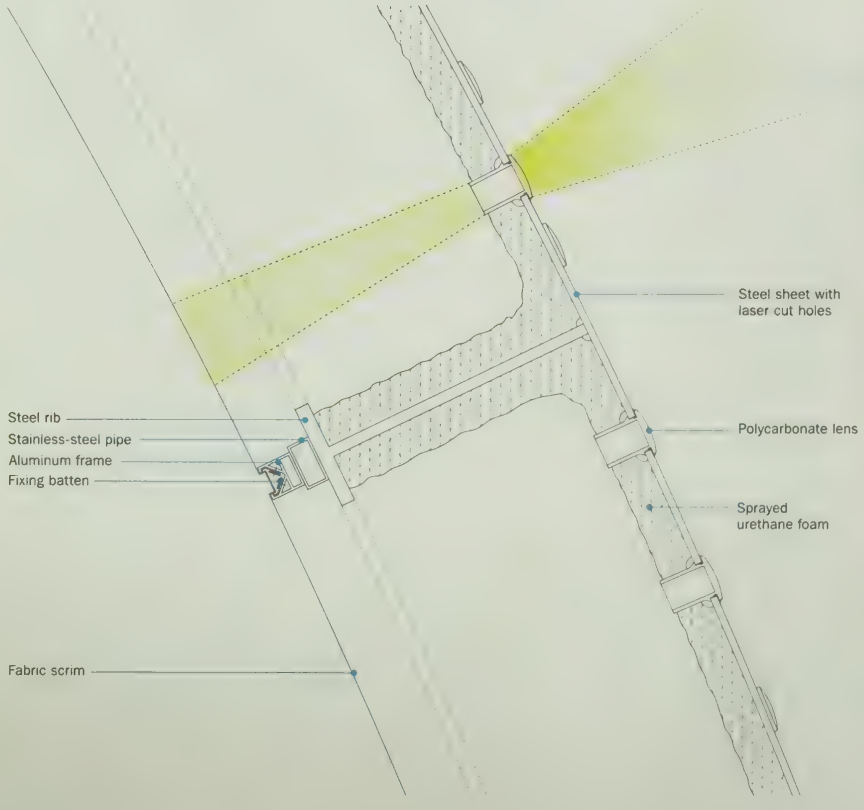




FLOOR PLAN

1. *Chapel*
2. *Corridor*
3. *Storage*

Before their dramatic exit into the garden, the bride and her father wait in a velvet-lined corridor behind the chapel (plan, left). Light from the lenses is projected onto a nylon scrim inside the dome (below). Without the scrim, the light would not read as a pattern.



SECTION THROUGH MOVABLE WALL



lyweds embrace. Arranged in a looping ivy pattern set into the 11-ton moving wall, 4,700 polycarbonate lenses project light onto a nylon scrim stretched 10 inches from the wall's inside surface. Two hydraulic rams (one at either end) lift the steel veil as if it were a roll-up garage door. "We were concerned about making the whole thing work," says Dytham. "But Kawasaki, who made the rams, said, 'We do stadium roofs that move. This is no big deal.' "

The disappearing wall not only offers a theatrical way of ending the ceremony, but serves the more prosaic function of quickly ushering guests out of the chapel and into the garden for a champagne toast. With everyone out of the building, the steel veil closes, allowing workers to prepare the chapel for the next wedding. Thanks to this careful choreography, the chapel can handle six weddings a day, running on an 80-minute cycle.

Inside the chapel, the architects used black granite for the flooring, stained-black pine for the walls, and black wood pews, so all the men in dark suits blend into the setting and allow the bride in white to stand out. Clear acrylic backrests on the pews encase translucent green "flowers" that seem to dance when sunlight hits them.

Working with Arup Japan, Klein-Dytham designed the chapel as a lightweight steel structure so it can ride out earthquakes. To minimize its visual impact on the garden when viewed from nearby hotel rooms, the architects pushed it about 12 feet into the ground and tucked it into the sloping site. A concrete basement provides space for radiant heating and cooling that is blown into the sanctuary.

Commentary

Having designed temporary structures such as construction fences and exhibitions, Tokyo-based Klein and Dytham understand that buildings exist in time as well as space. They exploited this knowledge to create a chapel in which light and movement change the visitor's experience from one moment to the next. ■

Klein-Dytham envisioned the chapel as two falling leaves, the front one made of perforated steel and the back one made of translucent glass set between tubular steel "veins" (right and below). The architects designed all the furniture and used mostly black materials (stained wood and granite) for the interior to let the bride stand out in white. The pews have clear acrylic backrests with translucent green "leaves" set within them.





Holy Rosary Catholic Church

St. Amant, Louisiana

3

TRAHAN ARCHITECTS DELIVERS A POWERFUL STATEMENT IN CONCRETE AND GLASS FOR A SMALL CATHOLIC PARISH OUTSIDE OF BATON ROUGE.

By Robert Ivy, FAIA

Architect: *Trahan Architects—Trey Trahan, AIA, partner in charge; Brad Davis, Kirk Edwards, AIA, Bryan Hammond, Michael Monceaux, Melissa Duhon, Lisa Hargrave, AIA, Jason Hargrave, AIA, project team*
Client: *Holy Rosary Catholic Church*
Interior designer: *Lauren Bombet Interiors*
Engineers: *Schrenk & Peterson Consulting Engineers (structural, civil); APEX Engineering (mechanical, electrical)*
General contractor: *Quality Design and Construction*

Size: *17,700 square feet*
Cost: *$2.4 million*

Sources
Poured concrete: *Sorrento Lumber Company*
Metal-and-glass curtain wall and skylights: *Architectural Glass & Metal*
Modified bitumen roofing: *Johns Manville*
Altar and tabernacle: *Fabricated by Tallix*
Interior ambient lighting: *Cutler Hammer*

For more information on this project, go to Projects at **www.architecturalrecord.com.**



The architecture of rural Louisiana tends toward mélange—often a mock Acadian style mixed with a dollop of neon. Parish churches, which are frequently the most significant structures, anchor the smaller communities. The Holy Rosary Catholic Church complex in the tiny unincorporated town of St. Amant, located halfway between Baton Rouge and New Orleans—near the larger town of Gonzalez—breaks from the formula.

Just 3 miles off bustling Interstate I-10, a collection of modest white buildings, designed in an unapologetically contemporary idiom by Trahan Architects of Baton Rouge, unifies a campus formerly distinguished by a casual jumble of building types. The recent architecture, in the words of Sister Mary John Hotard, the church's pastoral associate, "reflects where we are today."

Program

While the parish is small in Louisiana terms, consisting of 2,300 families, it had grown beyond the initial capacity of its sanctuary. The original cypress-sided church, dating from 1905, holds only 300 people. Furthermore, when the parish began a master-planning effort with architect Trey Trahan in 1998, its centennial in 2005 loomed large. Parishioners, with a building committee under the leadership of Father Robert F. "Bob" Stine, church pastor, were concerned that the beauty and rural character of their region was being swallowed up in the detritus of the strip-mall economy, currently eating away at nearby communities. Their own complex lacked unity and a sense of permanence. They needed a plan.

Architect and parishioners developed a prioritized list, including an administrative pavilion separate from classroom and other education buildings, and a new chapel or oratory that would seat 25 to 40 people and be appropriate for morning mass or private prayer. Ultimately, the still-standing green metal building called the "Green Monster" would come down, as would other inadequate

he austere concrete
alls of the complex set
apart from the unre-
arkable Louisiana
errain (opposite).
overed walkways and
uildings for adminis-
ation and education
efine a rectilinear
ourtyard within which
ne freestanding chapel
ollows its own geome-
y (right and below).





structures on the site. Economy dictated that heating and cooling be zoned to allow tempered spaces only during active periods. Money was an object.

Trahan, himself a practicing Catholic, worked closely with the parish, spending a year discussing both function and poetics, including "what the chapel would feel like, how the buildings would function, and what their relationships would be." Models included the work of Louis Kahn and, significantly, Le Corbusier's pilgrimage chapel at Ronchamp. Trahan asserts that his analogies found an appreciative local audience: "Many of them are more sophisticated than we might have given them credit for." The chapel would be both the parish's locus of spiritual activity and a waypoint on a continual spiritual journey, linked to other pavilions by walkways.

Solution

Today, an austere concrete wall, punctuated by an overhanging entry, stretches horizontally into the landscape, giving minimal clues to the activities inside. Radically cantilevered reinforced-concrete canopies, which feather out to near-impossibly thin edges, cast shade and shadow on interior perimeter walls and surmount walkways, which connect the primary new buildings. Offices for private counseling sessions face enclosed courtyards, which buffer Louisiana's fierce southern sun from inhabited space and provide privacy and landscaped serenity.

Building systems underscore

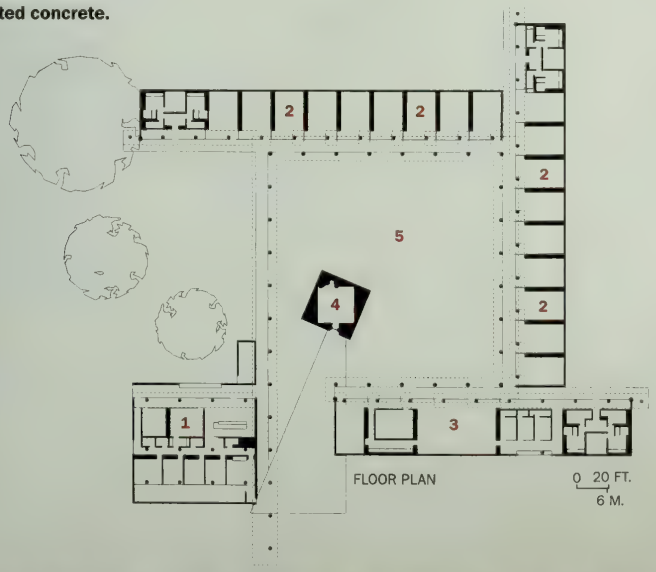
The north side of the administration building (above) looks onto the complex's main courtyard, while its south elevation features a narrow private yard (below), which is now lush with tall native grasses.

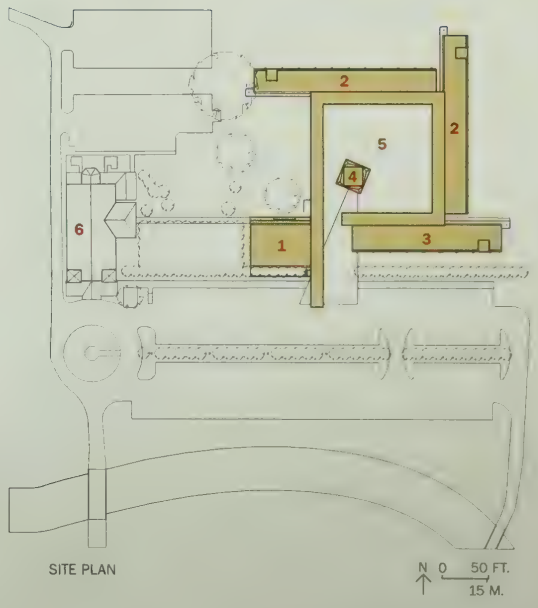




In the religious education building (above), daylight slides in from above to wash the lovingly crafted concrete.

1. *Administration*
2. *Classroom*
3. *Religious education*
4. *Oratory (chapel)*
5. *Sacred precinct*
6. *Existing church*







The chapel or oratory is a 30-foot-square space inspired by Le Corbusier's chapel at Ronchamp and the tatami-mat geometry of Japanese buildings. Trahan used the thick walls to sculpt light as it moves inside. The chapel is now furnished with simple wooden pews and a metal-and-wood altar.

both transparency and enclosure. Concrete walls proved integral to the architect's scheme, which demanded a degree of care unusual for the region. Concrete pours gained added importance from the contractor. "This is art!" read a sign he posted on the walls, alerting the trades to the importance of the work that they were doing. Butt-joint glazing opens interiors to the exterior courtyard.

Central to the entire scheme, the 30-foot-square chapel (which cost an amazingly low $300,000) derives its rotated geometry from Japanese tatami-mat configurations, a notion that spirals out from the building in a pathway to the entire site. This tiny space, both compressive and mysterious, casts light and shadow through a calculated series of apertures based on Christian symbolism. A cast-glass door, conceived and executed by craftsman John Lewis from California, glows with translucent power more brightly at its perimeter, its luminosity softening toward its center. The entire space encourages reflection, a sense of calm, and interiority.

Commentary

Holy Rosary Catholic Church demonstrates that powerful ecclesiastical architecture need not achieve cathedral scale. With spare assurance and mastery of form and proportion, coupled with a poetic approach to materials in the manner of Tadao Ando, architect Trey Trahan and his parish client have collaborated to produce a minor masterwork. Parishioners have expressed mixed feelings ("some love the interplay of light and shadow … some find it cold"), and one parishioner, examining the finished concrete wall, asked, "Where's the brick?"

Nevertheless, the chapel and surrounding structures of Holy Rosary join a distinguished pantheon of pilgrimage sites, including those that inspired the architect. The complex will continue to draw its own parishioners into contemplation, while bringing admiring devotees of sacred architecture to a tiny community called St. Amant. ■



Seaside Interfaith Chapel
Seaside, Florida

4 **MERRILL AND PASTOR HAS COMBINED AN AUSTERITY DRAWN FROM LOCAL TRADITIONS WITH A CIVIC PRESENCE SUITED TO A PROMINENT SITE.**

By James S. Russell, AIA

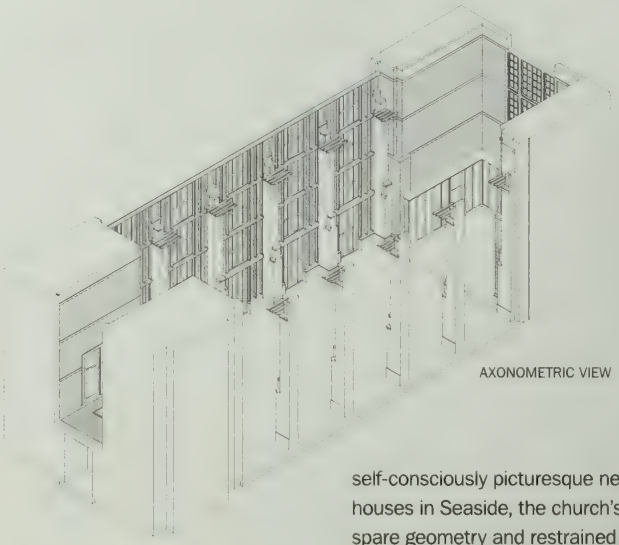
Architect: *Merrill and Pastor—Scott Merrill, designer and partner in charge; David Colgan, project manager*
Client: *Seaside Interfaith Chapel*
Consultants: *Frank Farley & Associates (structural engineering); Sklow & Runkel (mechanical, electrical); Robert J. Laughlin and Associates (lighting)*
General contractor: *Breaux Construction*

Size: *3,300 square feet*
Cost: *$1.5 million*

Sources
Roofing: *Galvalume*
Wood roof trusses: *Universal Building Specialities*
Wood cladding: *Western red cedar*
Wood floors and altar paneling: *Locally salvaged deadhead heart pine*
Pews: *Shaver Millwork*
Liturgical furniture: *Meridian Workshop*
Lighting: *Bega; Elliptipar; Lightolier; Rejuvenation; Kim*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Long before there was a celebrated holiday town called Seaside, its planners, Andres Duany and Elizabeth Plater-Zyberk, set aside a place for a church. By the time the town was ready to build one, some 20 years later, Seaside had become famous as the place where New Urbanism was seeded and tested. Its architecture had also considerably evolved from modest beach cottages and shotgun shacks inspired by local prototypes to elaborate confections of columns and cupolas.



AXONOMETRIC VIEW

Program

Although a Sunday beach service was held during the summer, potential congregants were too few, too transient, and too seasonal to support a full-time church until recently. Finally, in 1999 a group of residents set out to build an interfaith chapel, and Robert Davis, Seaside's developer, agreed to donate the land. "The first problem," said architect Scott Merrill, "was that it had to look like a church without reflecting any specific church tradition."

Solution

"We wanted to show nature and have natural light play a big role," said Patrick Roberts by telephone from his office at the Florida Association of Broadcasters in Tallahassee. Roberts, with his wife Pam, led the chapel-building effort.

Merrill found himself drawn to the basic geometric shapes and board-and-batten construction of old local churches—an austerity enforced by poverty. "That Alabama Stick Style took such great delight in describing the way it was put together," Merrill said. He offered the residents three schemes, one of which did not draw support because it looked too much like a Baptist church, according to Roberts. The board selected the one that most engaged the universal appeal of natural light.

As built, it is austerely yet delicately detailed. Volumetrically, its south-facing front elevation is a square surmounted by a pediment dimensioned as an equilateral triangle. The central band of glazing visually narrows the squareness of the base, while emphasizing the beefiness of the structure at the corners, where Merrill has built in the greatest sheer resistance for high winds. Amid the elaborately detailed, self-consciously picturesque newer houses in Seaside, the church's spare geometry and restrained trim help create presence without bigness. "I recognize the validity of small gestures," says Merrill.

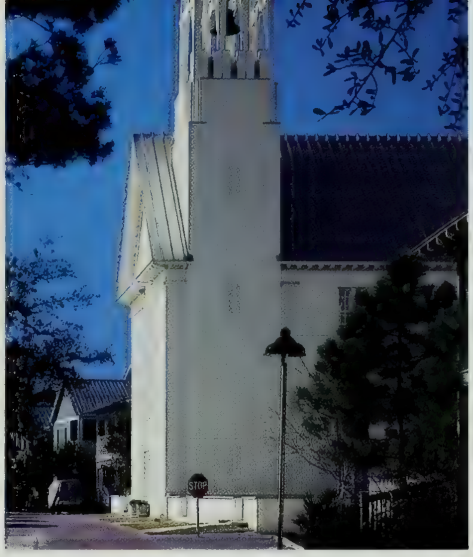
Roberts had made his own study of traditional local churches and had noted the "side gardens with picnic tables for outdoor fellowship." In Merrill's design, a cloistered porch and yard serve the same function.

With its narrow vertical bands of glazing, the lofty sanctuary evokes a building larger than the 200-seat space the structure comfortably envelops. The mullioned windows and internal shutters capture the contemplative character of an empty beach, atomizing the mist-laden light. Tall glass panes overlook the altar, opening the chapel to trees and sky while not admitting light where it would silhouette the celebrant.

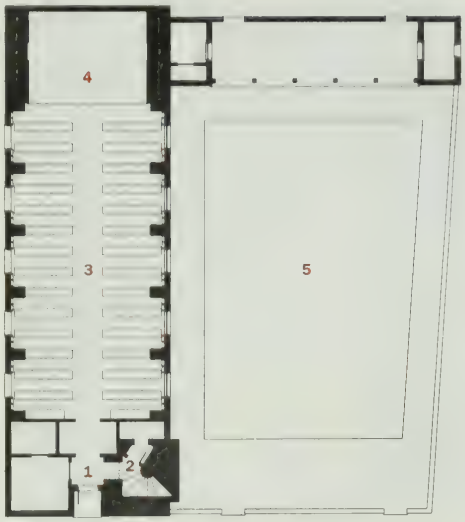
Services are held in the chapel every Sunday year-round. "People have felt a warmth from day one,"

In the plan of Seaside, the chapel site presides over a civic axis that bisects the town. Merrill centered the 64-foot-tall bell tower on the axis (far right and below), making room for a side garden and cloistered porch (below). Tall bands of glass (near right) open between masonry piers (axonometric, opposite).









FLOOR PLAN

1. *Entry*
2. *Bell tower*
3. *Nave*
4. *Altar/celebrant*
5. *Courtyard*

Roberts says, "whether they are Catholic, Jewish, Assembly of God, Southern Baptist, or Episcopal." It acts as an adjunct meeting space for Seaside's charter school and a chamber-music concert hall. Its 100-year-old bell chimes for weddings and warns of hurricanes.

Subsequent ecclesiastical work has taken Merrill in a different direction. His clients want structures that wrap seats around the altar. Glass is used sparingly "because entertainment in the form of amplified music and video is so much a part of the celebration now." He's wistful about the loss of connection to place this entails. "As you take away what distinguishes one from another, they become more generic."

Commentary

The tautness of the Seaside chapel's board-and-batten exterior suggests the poverty-seared austerity of the local tradition it draws upon. Out of telling details, Merrill has been able to combine this modesty with a gracious but welcoming monumentality suited to the place the town has made for the chapel. Merrill's design proclivities are traditional, but by examining tradition with a critical eye, he ends up with an elegant abstraction that quietly speaks to the way it is made as well as to the diversity of celebrations it accommodates. ■

Like old local churches, the chapel "describes" its construction. Wall surfaces carry gravity and wind loads through exposed studs to thick horizontal girts, which connect with stucco-covered masonry piers.



metaldek.com

See us at the AIA Show in Las Vegas
Booth #1557

The best ideas don't always happen at work.



Evenings, weekends, all-nighters, you name it. When the idea hits you we have the design tools to turn your thoughts into reality. Our new site is specifically designed to assist you 24/7 no matter where you are. Visit us anytime at www.metaldek.com.

Metal Dek Group
a unit of CSi

CIRCLE 112 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL RAILING SYSTEMS

ALL ARCHITECTURAL SYSTEMS DESIGNED, ENGINEERED AND MANUFACTURED BY C.R. LAURENCE

AWS ALUMINUM RAILING SYSTEM

Available in many configurations, these impact resistant extruded aluminum railings feature high structural durability and are specially coated to resist the corrosive effects of the elements and salt water.

STRUCTURAL GLASS RAILING SYSTEM

Perfect for projects where clear viewing and a sophisticated appearance are desired. Glass Railings also serve as an effective wind barrier, combining practicality and pleasing aesthetics to create an ideal outdoor balcony environment.

AWS WINDSCREEN SYSTEM

Popular in hotel and condo applications, CRL Glass Pool Surround and Windscreens create an effective barrier against wind and sound, without creating the confining feel of a typical fence.



COMMERCIAL AND RESIDENTIAL







HAND RAILS, GUARD RAILS, WINDSCREENS AND MORE...



JAB168-4/05



Ask for Your Free CD-ROM Catalog Today

The HR05 Railing Systems Catalog features hundreds of new structural glass products, plus valuable technical information and data. You can also view it online at **crlaurence.com** or get a free CD-ROM Catalog.

CRL® ISO 9001:2000 Certified
crlaurence.com

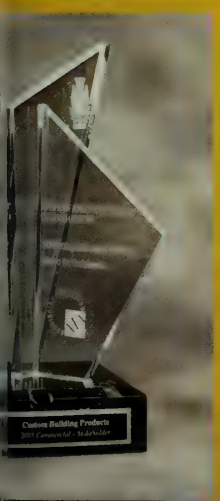
C.R. LAURENCE COMPANY
Architectural Products Manufacturing Division
Phone: (800) 421-6144 • Fax: (800) 587-7501

CIRCLE 313 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

You provide the "oooh."

We'll provide the "ahhh."





Winner of the 2005 AIA/CES Award for Excellence

Nothing's more rewarding than seeing your vision take flight. And no one's more committed to the successful completion of your tile and stone installations than our Architectural Services team. We simplify the specification process with everything from easy-to-use installation system CAD details and product data to personalized consultation with our team of certified professionals. In fact, we've just been honored by the AIA/CES as a premier provider of continuing education programs. Our expertise, combined with our full line of installation systems and outstanding warranties, give you the resources you need to make your projects "all systems go."

AIA/CES REGISTERED PROVIDER

CUSTOM BUILDING PRODUCTS

Architectural

INSTALLATION SOLUTIONS FOR TILE AND STONE

800-272-8786

www.custombuildingproducts.com

CIRCLE 114 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



If your floor was 8% more efficient, would you be 8% happier?

Well, happiness, like efficiency, is difficult to measure. But 90% of business decision makers say improvements in office design can increase productivity by creating environments where obstacles to efficiency are minimized or eliminated.* Carol Conrad of UCLA believes that flooring plays a big role in creating more efficient, effective spaces. She specs Johnsonite rubber flooring because "investing in elements that make people safer and more comfortable pays dividends." Find out how Johnsonite can help you create high-performance environments that deliver economic return. 800.899.8916 www.johnsonite.com

*ASID research study: The Impact of Interior Design on the Bottom Line

Johnsonite

© 2005 Johnsonite, a div. of Dal-Tile Int.

CIRCLE 115 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Architect: Hillary Holland Fidler Associates

Quality demands a formal audit.



Certi-label™ cedar shake and shingle manufacturers undergo third party inspections PLUS a second level of quality assurance by our own Cedar Quality Auditor.

Certi-label™ products have been tested to meet these recognized standards:

- **Class A, B and C fire-resistance**
- **UL 2218 Class 3 & 4 impact resistance**
- **UL 1897 (fourth edition) wind uplift**

Cedar Shake & Shingle Bureau

tel: **604-820-7700** fax: **604-820-0266** **www.cedarbureau.org**

CONTINUING EDUCATION AIA

See us at the AIA National Convention, Booth #1373

Certi-label™ products. Always tailor made.

CIRCLE 116 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



New, improved Hi-Abuse® and Hi-Impact® BRAND XP® Wallboard.

Going where other wallboards fear to venture.

Hi-Abuse XP – **mold/abuse resistant** – Features a rugged gypsum core wrapped in heavy abrasion-resistant paper. Resists surface abuse as well as mold. Ideal for walls and ceilings in high-traffic areas including classrooms, cafeterias and day care centers.

Hi-Impact XP – **mold/moisture/abuse/impact resistant** – Combines the same surface toughness and mold resistance of Hi-Abuse XP with the added performance characteristics of impact and moisture resistance. The choice for hospitals, prisons, public housing and other areas requiring exceptional durability and longevity.

National Gypsum®

TECHNICAL INFO: 1-800-NATIONAL

Excellence Across The Board®

nationalgypsum.com

CIRCLE 117 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Born Again: A New Skin Offers a Fresh Start

THE RECLADDING OF THE RICHMOND, VIRGINIA, CITY HALL IS AN INVESTIGATIVE STUDY OF THE INTIMATE RELATIONSHIP BETWEEN ARCHITECTURAL DESIGN AND THE LIFE EXPECTANCY OF MATERIALS

By Sara Hart

Although there are no hard numbers, anecdotal evidence suggests that, in particular circumstances, curtain walls age faster and more painfully than the rest of a building. It seems that they're coming unglued, so to speak, with increasing regularity. As many of the curtain walls of 1960s and '70s high-rises begin to show signs of deterioration, owners must weigh the costs of the many reparative options available, and they must enlist design experts to determine the best course of action. The problem is becoming pervasive enough that facade consulting is a growing multidisciplinary specialty in the architecture profession.

Built in 1970, the Richmond, Virginia, City Hall houses the staff and administrative offices of the city government, mayor, city council, and school administration, as well as offices for 18 departments and agencies; it is home to more than 800 employees. The building had served the community well for 27 years, but in the mid-1990s, the city discovered that the facade was losing its structural integrity at a steady and alarming rate.



Before and after: Richmond City Hall got a new and improved identity when its deteriorating marble facade (right) was replaced with one of granite and aluminum (left).

In 1997, Richmond commissioned a team of consultants led by Fred Ortiz, AIA, of Scribner, Messer, Brady & Wade Architects (SMBW) of Richmond, and Daniel Lemieux, AIA, of Wiss Janney Elstner (WJE), of Fairfax, Virginia, to identify the extent of damage and devise a plan to revive the building and the city hall's image as expressed in its architecture. Thus began a four-year effort involving forensics, emergency remediation, cost analysis, facade removal, redesign, and replacement.

This kind of commission appears to be a backward approach to architectural design, and not every architect's cup of tea. Not only does the architect start with someone else's design, it is a design that has failed to a greater or lesser degree, with serious consequences. And yet, there are regionally committed practitioners who feel a civic obligation to aid urban revitalization. "The City Hall project resonated with the core value of our practice," says Willard Scribner, FAIA, principal of SMBW Architects. "In an era when cities throughout Virginia and the Southeast face pressing infrastructure needs and declining resources, we seek ways to help address these needs through design excellence, innovative strategies, and funding vehicles."

The following story is based primarily on the study prepared by WJE for SMBW, which eventually led to a new architectural image for Richmond. As part of the study, SMBW and WJE's project team reviewed all the available documentation regarding the original design and its construction, repairs, and renovations over the years, and routine maintenance. Next, they performed an on-site survey to verify the as-built construction of the building, including materials, components, and systems. They found that the infrastructure was functional and in relatively good working order, but that the marble panels of the building envelope were not. As a matter of fact, cupping/bowing, edge-cracking, and other conditions were visible in many of them.

The city hall is a marble-clad rectangle with a tower that rises from the center of a four-story plinth that is divided into quadrants. The tower is a straightforward, uniform structure, articulated by perimeter

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 268 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue include the following sponsored sections: "Factors for Achieving Water Conservation Excellence," sponsored by Sloan Valve, page 284; "Greater Vision: Alternate Window Materials in Commercial Buildings," sponsored by Pella, page 293; and "The Art of Product Research and Selection," sponsored by Sweets, page 299.

LEARNING OBJECTIVES

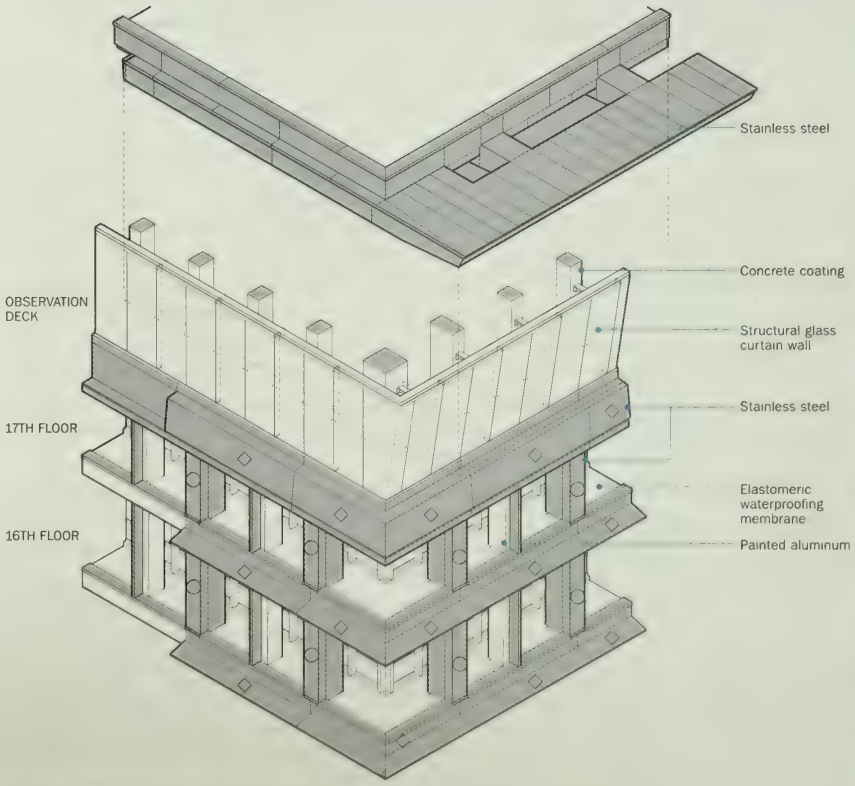
After reading this article, you should be able to:

1. *Describe possible problems with marble veneer buildings.*
2. *Explain the cause of the problems with marble veneers.*
3. *Discuss the various remedies for buildings with veneer problems caused by environmental conditions.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to **www.architecturalrecord.com**.



The new aluminum-clad observation deck (left) replaces the prior one (below). The original window frame enclosed only three quarters of the opening and was topped off with a "suicide hook"—bent stainless-steel square rods with a sharpened point. The new windows are thoroughly glazed. Panels are hung from vertical aluminum-rail brackets anchored to the concrete column (bottom).



TOWER SOUTHWEST CORNER COMPONENT ASSEMBLY AT OBSERVATION DECK







A stainless-steel capital tops the painted concrete column (left and opposite, top) fronted by granite cladding. The diagram at right shows how the structural system at the perimeter works.

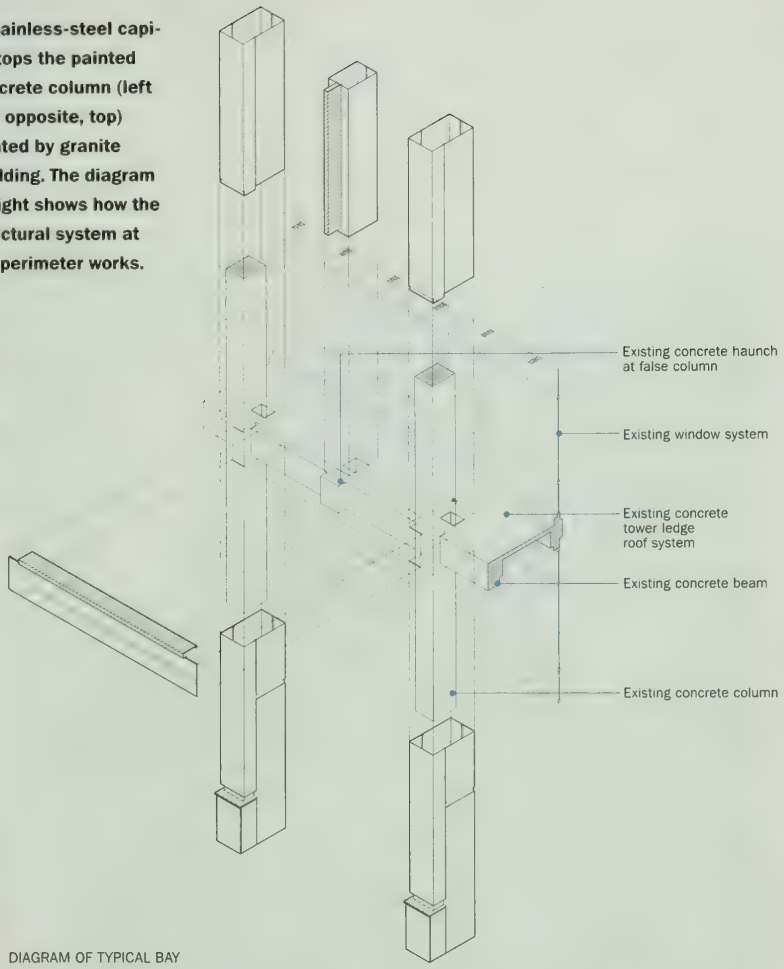


DIAGRAM OF TYPICAL BAY

columns that are detached from the exterior curtain-wall system so that the fenestration appears to be made up of deeply recessed windows.

The problem

The thin marble veneers that cover the entire structure were the problem. Microscopically, certain marbles are composed of a series of tightly interlocked, crystalline calcite grains that are adhered together with a calcite binder. Changes in temperature reek havoc on this type of structure by causing intergranular fractures, or microcracking, in the calcite binder. The grains within the binder "disassociate," meaning they come apart. This constitutes a permanent change in the material properties of the marble, which causes a volumetric expansion. And the march toward deterioration begins. This condition is known as *hysteresis*, and it's as bad as it sounds.

Hysteresis is especially threatening to thin marble veneers, a popular cladding material in the 1970s. Not only are the panels of Georgia white marble on the city hall thin, they have a coarse grain, which makes them more prone to hysteresis than fine-grain marbles, such as Vermont marble.

In hysteresis, individual panels will deteriorate at different rates, depending on the extent of exposure to temperature changes. Obviously, the exterior faces, which are exposed to sunlight and weathering, will experience hysteresis more than the protected, interior areas. Because the exterior surfaces therefore deteriorate faster, the panels will cup and bow outward. Severe weathering will cause visible cracking at the panel edges. As the bowing gets worse, moisture penetration increases, and the cracks in the exposed panel surfaces open up more.

In cities, acid rain can accelerate the dissolving of the calcite binder, which increases the rate of disaggregation of the stone. Disaggregation is also known as "sugaring," due to the loose, powdery calcite grains that appear on the exposed surfaces when this happens. This leads to more edge-cracking and distress within the panels, which, in turn, leads to significant strength loss in the stone.

For the past 30 or 40 years, hysteresis has been acknowledged as a serious condition affecting marble, but its effect on thin stone veneers was not widely known at the time Richmond City Hall was designed and

FOR 30 OR 40 YEARS, HYSTERESIS HAS BEEN ACKNOWLEDGED AS A SERIOUS CONDITION AFFECTING MARBLE.

built. Today, it is generally accepted that hysteresis is what might be called a terminal disease for thin marble veneers, since it can neither be reversed nor cured. Once the disease has reduced the flexible strength of a marble panel to between 400 and 600 psi (1,000 psi is the current minimum industry standard), the structural integrity of the stone has probably been forever lost, and in situ repair or stabilization is no longer a viable option. Eventually, the panel will become so fragile that it will become dangerous to leave it on the building. This was the case with Richmond City Hall, as the SMBW and WJE study reported.

Horizontal fins on the southern face of the building (below) will help reduce direct sunlight and heat gain. An aluminum overhang (right) mimics the cornice lines of neighboring buildings.





Buying time

In October 1995, before WJE and SMBW entered the picture, a temporary solution was implemented in the name of public safety. Five thousand fiberglass straps and corner supports were installed around the envelope to ensure that the marble panels stayed in place. "While the straps prevented shards of marble from falling to the sidewalks below," explains Scribner, "they restrained thermal movement, which caused further bowing of the panels and accelerated the deterioration process." It couldn't have come as

THE PANEL WILL BECOME SO FRAGILE THAT IT WILL BECOME DANGEROUS TO LEAVE IT ON THE BUILDING.

a huge surprise that over the years the deterioration continued, and new cracks developed that again raised serious concerns about public-safety issues and called for a genuine architectural solution.

This is why, in September 1997, SMBW and WJE were called to study the situation further and search for a long-term solution. After the forensic part of their study was concluded, the team suggested immediate short-term mitigation for the different areas of the complex to complement the fiberglass-strap treatment. The marble panels in question are of two thicknesses. The tower's fascia and soffit panels are 2 centimeters thick, while the quadrant panels are 3 centimeters. The panels range in size from 6 to 18 square feet, depending on location, and are supported by different types of dead load anchors and "hairpin" anchors, many of which had become disengaged, or at least were observed to be overstressed.

Whereas the study was detailed and comprehensive, only a summary of the final recommendations can be included here. With regard to the quadrants, the study concluded that laboratory-tested marble samples had higher flexural strength, and panel substrates and anchors were in better shape than other areas of the building. It therefore recommended that temporary pinning/stabilization was a viable, short-term solution, with the added recommendation that visual inspections be frequent.

The tower, however, was more vulnerable to failure due to strength loss evidenced by bowing and edge-cracking. Consequently, the pinning/stabilization recommended for the quadrants was not an option. SMBW and WJE insisted that the worst panels be removed immediately. In this instance, they recommended that they be temporarily replaced with a fully anchored exterior-grade plywood or similar weather-resistant material, painted to match existing marble, and sealed to resist moisture penetration. As with the quadrants, the study recommended frequent close-range surveillance.

The options

With the immediate crisis resolved, it was time to pursue a design strategy for the total recladding of the tower and quadrants. Due diligence



al Institute.* is a low emitting product for better, cleaner indoor air quality.
ENGUARD INDOOR AIR QUALITY ... mark is a certification mark used under license through the GREENGUARD Environmental Institute.
K PANTHER ... ©1964-2005 Metro-Goldwyn-... Studios Inc. All Rights Reserved. The color PINK ... registered ... mark of Owens Corning. ©2005 Owens Corning.

ot surprising that people concerned about the quality of the air in their homes choose Owens Corning. PINK FIBERGLAS® tion is certified* for better indoor air quality by the GREENGUARD Environmental Institute.℠ But it's also the choice of e concerned about the quality of our planet's air, because PINK FIBERGLAS Insulation reduces energy consumption. And that es the production of greenhouse gases. PINK FIBERGLAS Insulation even contains the most recycled glass of any insulation. nd it saves money on energy costs. No wonder people feel comfortable choosing Owens Corning PINK FIBERGLAS Insulation. ore information, call **1-800-GET-PINK** or visit **www.owenscorning.com**.

OWENS CORNING®
INNOVATIONS FOR LIVING™

INSULATION

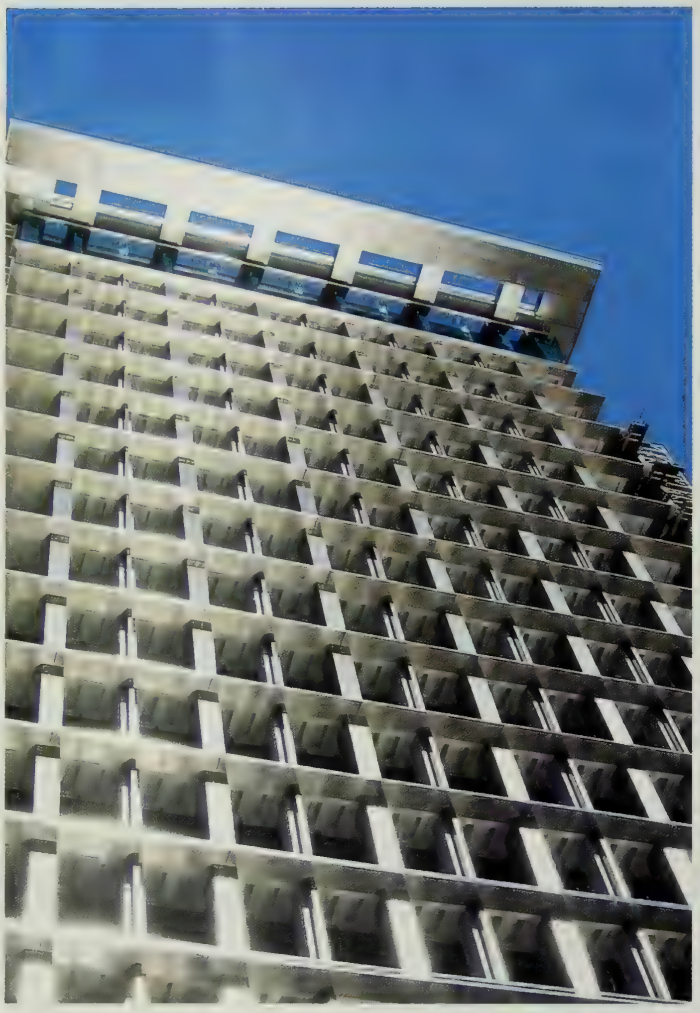


SCS Certified
Minimum 9% post-consumer recycled and the balance (26%) pre-consumer recycled glass (North American plant-wide average)
35% Recycled Content

GREENGUARD®
Indoor Air Quality Certified

ENERGY STAR
HOME SEALING

CIRCLE 118 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/







Several features distinguish the new cladding (right) from the old. The nonstructural columns in the original marble-clad envelope (far right bottom) were removed in order to open up the corners in the new scheme (far right top).

required that the architects study every material option. Material durability, service life, serviceability, aesthetics, exposure, cost, and relative constructability were the important factors for consideration. They researched granite, limestone, lightweight natural stone panels, architectural precast concrete/cast stone, glass-fiber-reinforced concrete (GFRC), precast-polymer concrete panels, exterior insulation and finish systems (EIFS), aluminum composite panels, and solid aluminum panels.

Each material had advantages and disadvantages, and with the right detailing, any of them could have performed well. However, the architects were focused on only one application—the envelope of Richmond City Hall. Therefore, they limited their judgments to the unique conditions presented in this particular case. As narrowly focused as they were, each material was studied carefully and its attributes and shortcomings were documented in the study. For instance, granite has a higher minimum compressive and flexural strength, which resists the effects of hysteresis, making it an excellent choice with regard to durability and long-term performance. Limestone has these qualities, as well, but requires a greater thickness to meet acceptable safety factors. Lightweight stone panels are relatively new to the architectural industry and were created as an alternative to high-cost natural stone. The typical panel is a thin layer of natural stone and epoxied aluminum honeycomb, which provides structural stability.

Precast concrete/cast stone is durable and less expensive than natural stone and can be formed to many different sizes and shapes and colored, or else finished in a wide range of textures. GFRC is similar to precast. The fiberglass reinforcing supplements or replaces steel reinforcing, thereby reducing the dead load by up to 75 percent. Precast-polymer concrete panels use polymer in addition to or instead of Portland cement. The type of polymer used is an important consideration, especially when freeze-thaw conditions are a determining factor. EIFS are a multicomponent exterior wall systems, consisting of insulation board with a base coat reinforced with glass-fiber mesh, an adhesive or mechanical attachment devise, and a finish coat to protect the entire system. Aluminum composite panels are similar to lightweight natural stone panels. Solid aluminum panels are also lightweight and durable and can be detailed for simple installation.

DUE DILIGENCE REQUIRED THAT THE ARCHITECTS STUDY EVERY REASONABLE MATERIAL OPTION.

The proposal

All of these options were presented to the city with recommendations for or against their appropriateness. For the purpose of a design study, SMBW suggested that they proceed with a granite and aluminum com-

RETHINK PRECAST.



esy of COSI

CIRCLE 119 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

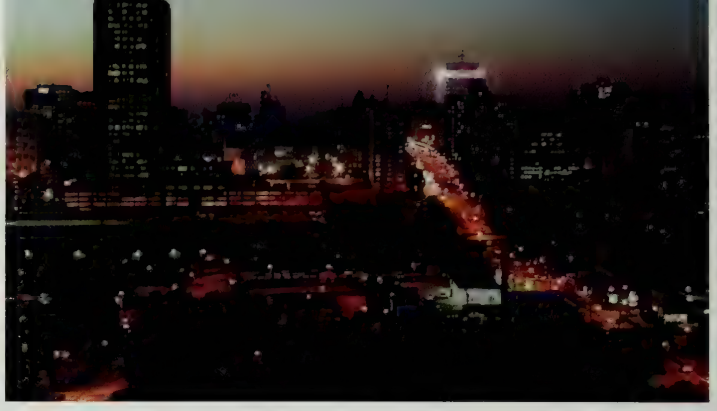
High lets you take precast design farther than you ever dreamed possible. That's why internationally renowned architect Arata Isozaki relied on precast concrete to meet the unique challenges of the striking Center of Science and Industry (COSI) in Columbus, Ohio. High's unparalleled commitment to new technology and innovation has led to advancements such as carbon fiber reinforced CarbonCast™—precast that's stronger, lighter and more durable, allowing a virtually unlimited selection of colors, textures and finishes at no additional cost. And the 15'-wide MEGA-Tee deck system enables wider spans and more open plans in total precast buildings and parking garages. Cutting-edge structures like COSI are possible with High's expert technical assistance in all phases of a project, from design to erection. High gives architects the flexibility to explore unique solutions while ensuring a job is completed on schedule and on budget. Call High to learn more about how to rethink precast.

HIGH CONCRETE GROUP

HIGH CONCRETE ▪ CONCRETE INNOVATIONS & ANSWERS℠ ▪ CALL US AT 800-PRECAST ▪ WWW.HIGHCONCRETE.COM

posite metal (ACM) combination. (Although an in-kind replacement of marble with granite would be the most straightforward solution, it would also be the most expensive.) Granite panels proved to be the best stone alternative within the structural loading criteria, for unlike marble, it resists the effects of hysteresis, making it an excellent choice with regard to durability and long-term performance. ACM is cost-effective and as durable as a solid aluminum panel when correctly installed. It is fabricated from coils of predetermined widths, so more money can be saved by dimensioning the panels to minimize waste. The metal is coated with a high-performance paint, but SMBW recommended a metallic finish to reveal the material's nature.

SMBW developed a strategy for optimizing the visual effect of the granite by limiting its use. Although seemingly contradictory, this approach resolved many issues. Granite would be applied at the quadrant levels and the council chambers, where it could actually be seen from ground level. Aluminum would replace granite on the tower, thus avoiding having to hang granite panels from wires, which were the typical soffit conditions. Furthermore, the column enclosures in the tower, clad in marble, could be reduced by 35 percent in perimeter size, because they only enclosed the m/e/p systems, not the structure. In addition, corner columns could be removed entirely, improving views from corner offices. Finally, the new scheme included a projection at the roof line on the building's front to create a cornice, which would be more architecturally in tune with the cornice lines of surrounding buildings.



New lighting at the observation deck will be turned on at night, allowing the city hall to glow like a beacon in the skyline.

SMBW project manager Fred Ortiz summarizes the effects of their efforts: "We took advantage of reskinning the building with a new image in mind that was progressively Modern in nature while sensitive to Richmond's traditional past and fast-changing urban context. The new face will redefine the tower's presence on downtown's main thoroughfare and mark the skyline in distinct fashion. It's a new beginning." ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "Born Again: A New Skin Offers a Fresh Start" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 378).**
- **Fill out and submit the AIA/CES education reporting form (page 378) or download the form at www.architecturalrecord.com to receive one AIA learning unit.**

QUESTIONS

1. The problem of curtain walls having hysteresis is prevalent in which group of buildings?
- **a.** all buildings from the 1960s and '70s
- **b.** all buildings with a thin marble veneer
- **c.** all buildings with a natural stone veneer
- **d.** marble-veneer buildings with calcite grains and a calcite binder

2. Disaggregation of stone is also known as which?
- **a.** cracking
- **b.** hysteresis
- **c.** sugaring
- **d.** expansion

3. Hysteresis, which is an incurable condition caused by changes in temperature, can be visually detected by all except which?
- **a.** marble panels will be cupped
- **b.** marble panels will show cracked edges
- **c.** marble pieces will fall off the building
- **d.** marble will change to a darker color

4. Hysteresis is caused by which?
- **a.** cutting fine-grain marble into thin veneer
- **b.** microcracking in the calcite binder
- **c.** loss of strength in the marble panel
- **d.** moisture penetration at bowed edges of the marble panel

5. What causes the acceleration of hysteresis?
- **a.** temperature changes
- **b.** exposure to weather
- **c.** extremely dry weather
- **d.** a and c

6. Which material is most prone to hysteresis?
- **a.** thin marble veneer with fine grain
- **b.** thin granite veneer
- **c.** thin marble veneer with coarse grain
- **d.** thin limestone veneer

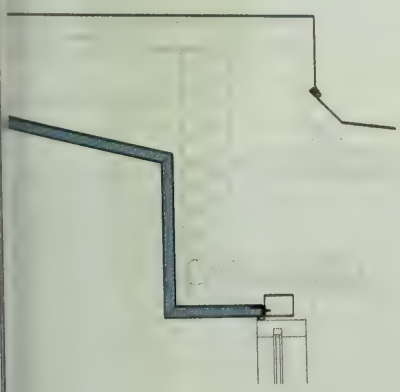
7. Glass-fiber-reinforced concrete uses fiberglass instead of steel reinforcing, resulting in which benefit?
- **a.** reduction of dead load up to 50 percent
- **b.** reduction of dead load up to 75 percent
- **c.** reduction of freeze-thaw concerns
- **d.** increased stability

8. What material was used for the temporary replacement of the tower panels after the problem was discovered?
- **a.** fiberglass panels
- **b.** aluminum sheets
- **c.** exterior-grade plywood
- **d.** polymer concrete panels

9. Which is true for both marble and granite?
- **a.** they are natural materials
- **b.** they show the signs of hysteresis
- **c.** they can be mined in the U.S.
- **d.** they show color variations

10. Which was not an advantage of changing the tower cladding from marble to aluminum?
- **a.** column enclosures could be reduced in size
- **b.** corner columns could be removed
- **c.** material waste could be minimized
- **d.** the original look could be maintained





MAKING THE GRADE IS EASIER THAN EVER WITH ALPOLIC®

In fact, ALPOLIC® Aluminum Composite Materials (ACM) don't just make the grade, they pass with flying colors. That's why ALPOLIC®'s Silver Metallic ACM, (more than 8,600 square feet of it) was the choice for a recent cladding job at Fredericksburg Academy in Fredericksburg, Virginia. The focal point of the building combines radius, straight and tapered panels, creating a monumental appearance and a unique architectural statement on the modernization of educational facilities in Virginia. The industry's worldwide leader in innovation, ALPOLIC offers Aluminum and Metal Composite Materials of unrivaled durability, superior flatness, and lightness of weight, yet amazing flexibility and ease of fabrication. Combine all that with ALPOLIC®'s great looks and virtually limitless range of finishes and it's clear that ALPOLIC® is in a class by itself. For more information, call 1-800-422-7270 or visit us at www.alpolic-usa.com.

PROJECT: Fredericksburg Academy

ARCHITECT: Cooper Carry, Alexandria Virginia

FABRICATOR/SYSTEM: W. H. Stovall | Rout and Return Gasket 175

PRODUCT: ALPOLIC 's Silver Metallic

ALPOLIC®

Reflecting The Future, Today.

A Member of the Corafion® Family

LUMIFLON

©2005 Mitsubishi Chemical America, Inc. All Rights Reserved

CIRCLE 120 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Trespa Meteon®: The Head of Its Class.



Project Architect: Legat Architects,
Construction Manager: Gilbane Building Company
© Paul Rivera/archphoto 2004

Erik Andersen, Architect
HOK Chicago
"Meteon is everything an architect wants—environmentally friendly, durable, economical and aesthetically expressive with a wide selection."

David Buckley, Specifier
HOK St. Louis
"Trespa Meteon is a really attractive solution that meets sustainability criteria that many projects require."



Trespa Meteon® is an especially appropriate building material for learning facilities because years of research, expertise and knowledge went into its development. The result is a truly state-of-the-art exterior facade. Architects at HOK specified Meteon to give William Rainey Harper College in Palatine, Illinois a "high-design" look that's weather resistant, colorfast, impact resistant and easy to clean—even with organic cleaners and detergents. Meteon is also ideal for fascias, sandwich panels, storefronts, soffits, balconies and balustrades and is available in a wide range of colors, textures and patterns.

Make the educated choice. Choose Trespa Meteon.
Call 800-4-TRESPA today for more information.

www.TrespaNorthAmerica.com

®TRESPA

All the best qualities in one panel

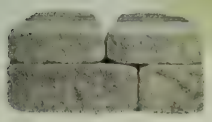
CIRCLE 121 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

RANDOM FACE PATTERNS

THERE'S MORE TO THIS RETAINING WALL THAN MEETS THE EYE.

GOOD LOOKS ARE ONLY PART OF VERSA-LOK MOSAIC'S STRENGTH. Behind the handsome face of Mosaic retaining walls lies another secret to VERSA-LOK's success: it's the only solid, top-pinning system in the industry. With Mosaic, you not only get stunning random-pattern walls with an artistic flair, but structural integrity and easy installation as well.

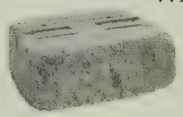




Mosaic's random pattern creates visual appeal.

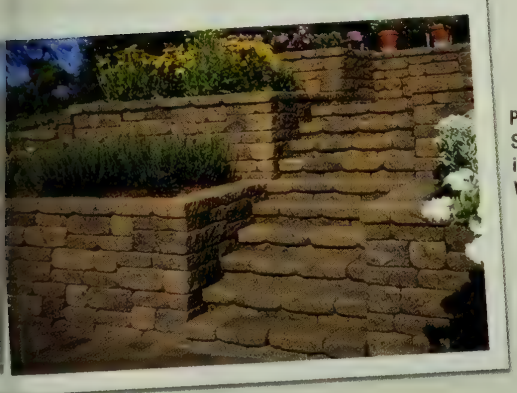
When you want that distinctive, historic texture without waiting 300 years, specify Mosaic's Weathered option. Weathered Mosaic displays a natural, vintage appearance without compromising strength. VERSA-LOK Weathered walls not only look as if they've stood the tests of time, they will!

TWO PRODUCTS, ENDLESS POSSIBILITIES. In addition to the hard-working random-pattern Mosaic product, VERSA-LOK Standard remains the most versatile retaining wall unit on earth. Marvelous curves, corners, stairs, freestanding walls, and columns are all easily constructed using VERSA-LOK Standard — without any specialty pieces to worry about. It all boils down to this: You can do more, and do it easily — with VERSA-LOK.



VERSA-LOK is the industry's only solid, top-pinning system.

WITH VERSA-LOK, IT DOESN'T TAKE A MIRACLE TO CREATE A MARVEL. For more information and everything you need to start creating modern landscaping marvels, call 800-770-4525 or visit www.versa-lok.com.



Private Residence, Scandia, Minnesota, in VERSA-LOK Weathered Mosaic

VERSA-LOK®
Retaining Wall Systems
Solid Solutions.™

Oakdale, Minnesota
800-770-4525 • www.versa-lok.com

© 2004 Kiltie Corporation

CIRCLE 122 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





Tall, but never more powerful than their environment, turbine blades turn graceful to the rhythms of the wind. At the Kattega waterway between Denmark and Swede (left), turbines are visible from various vantage points in Copenhagen harbor.



A Mighty Wind is Blowing Across Land and Sea

THE WIND POWER INDUSTRY IS ROBUST, THERE IS ABUNDANT AND DETAILED INFORMATION READILY AVAILABLE, AND THE POTENTIAL FOR CLEAN, ENDLESS ENERGY HAS NEVER BEEN MORE ATTAINABLE

By Barbara Knecht

In the 1920s and 1930s, electric radios were the primary form of entertainment and access to news, including FDR's fireside chats. However, only about 10 percent of America's farm families had electricity from a central source. In order to sell radios, the manufacturers sold small wind turbines to generate electricity to power the radio, as well as a few electric lights. Perhaps a million small turbines dotted the landscape of rural America during the Depression. In 1936, FDR created the Rural Electrification Administration to run power lines to family farms. Eighty years later, the American wind industry has been resurrected, and wind is the fastest growing energy source worldwide, expanding at a rate of 32 percent annually.

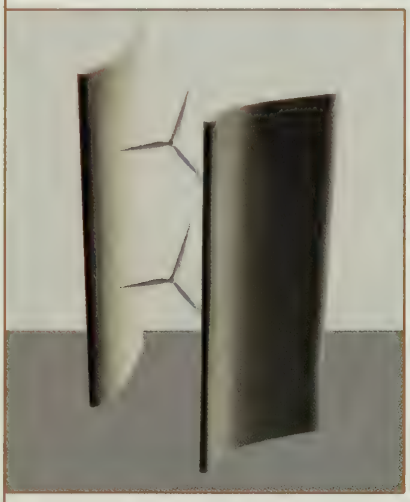
Windmills or turbines are the opposite of fans. A fan uses electricity to create wind; a turbine uses the wind to create electricity. Wind turns the turbine blades, called aerofoils, which spin a shaft that drives a generator that makes electricity. Electricity generated by turbines is measured in kilowatts (kw) and megawatts (mw). Turbines are rated by their peak power; actual production is less, as a result of varying wind speeds. Consumption is described by energy, a function of power and time. Germany is the leader, with 14,609 mw of installed power, and the U.S. is second with 6,347 mw. One mw is enough to supply 250 to 300 average American homes. Tiny Denmark (population 5.4 million) produces 3,110 mw of pollution-free power from the wind. Denmark's Wind Industry Association (www.windpower.org/en/core.htm) aims to supply 50 percent (16 billion kilowatt hours [kwh]) of its consumption by 2025, while the U.S. Department of Energy (DOE) has set 5 percent (250 billion kwh) as a goal for the U.S. by the year 2020.

Barbara Knecht is an architect and journalist based in New York and Boston. She contributes to RECORD *regularly on building science and related technologies.*

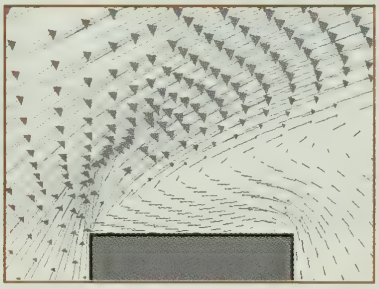
For this story and more continuing education, as well as links to sources, white papers, and products, go to **www.architecturalrecord.com**.

Wind Energy in the Built Environment

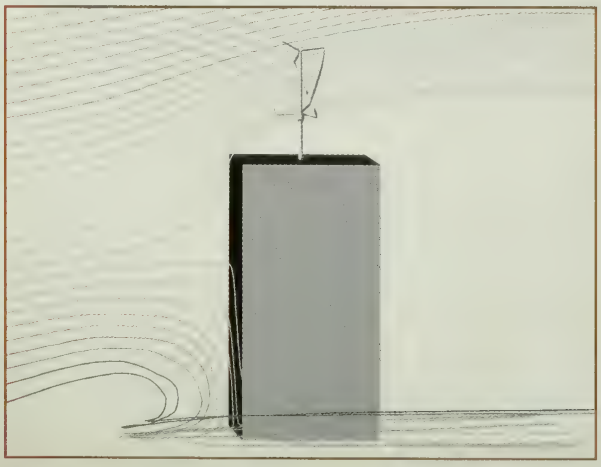
Sander Mertens, who was aerodynamic engineer of the Turby wind turbine while a researcher at the Technical University of Delft, created these diagrams to show how buildings can be designed so that wind harvest is maximized.



Example of shrouded horizontal wind turbines—wind turbines between airfoil-shaped buildings. Such building shapes are able to accelerate the wind speed for certain wind directions. The wind turbines in the accelerated wind speed thus show an increased energy yield compared to bare turbines.



Velocity vectors around a sharp-edged flat roof found by a Computational Fluid Dynamics calculation. Note that the vector length and accordingly the velocities close to the roof are small and partly directed toward the wind. A wind turbine has to be sited carefully in this region with low velocities, however, because the region experiences high turbulence, as well.



Streamlines of the flow around a sharp-edged flat roof found by a Computational Fluid Dynamics calculation. The boundary separates at the upwind roof edge, and the main flow around the roof is deflected. The wind turbine is the vertical axis wind turbine called Turby, which is specially designed for application in the built environment and on roofs.

Windmills, or turbines, have evolved a long way from the stumpy but picturesque multibladed wood-and-brick structures so firmly symbolic of the Dutch countryside. Go to Holland (or the United Kingdom, Spain, India, Germany, Denmark, Sweden, Greece, Egypt, Japan, China, parts of Africa, California, Texas) today, and you will find soaring turbines with two- or three-bladed rotors made of materials such as steel, Teflon, and fiberglass, some reaching 300 feet in height.

Typically, the basic components of turbines include the blades, which are attached to a spinner or hub, and the gearbox and generator, which are housed in a covering called a nacelle. The controller and brake are also located within the nacelle (see diagram, page 278). New products are invading the market, including direct-drive machines that eliminate the gearbox and longer, stiffer, more slender blades of lightweight material, such as carbon fiber. Turbines typically have a minimum operating speed, called the cut-in speed, around 7 to 9 mph, as well as a maximum, or cut-out, speed, typically around 55 mph. These are characteristics of utility-scale turbines found singly or in groups by the dozens or even hundreds in wind farms or parks. They are also known as wind-power plants and are found on land or, commonly in Europe, offshore, where winds are plentiful and unobstructed, and space for the turbines is readily available.

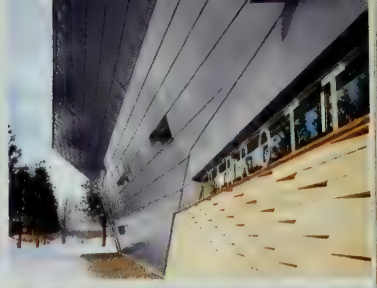
In spite of all these advances to harvest free energy, the U.S. still produces more than 50 percent of its electricity from coal, 20 percent from nuclear, and 16 percent from natural gas. Only 7 percent comes from hydropower, and under 1 percent from renewables such as sun and wind. That the cost of producing electricity with wind power has plummeted is an encouraging sign, but cost comparisons are tricky. Conventional fossil-fuel sources are heavily subsidized. However, experience in Europe and the U.S. proves that utility-scale wind farms can produce electricity that costs virtually the same as fossil fuels, which is about 3 to 5 cents per kwh. Small-scale wind-collection systems are emerging and offer a lot of opportunity for thinking about building integration and urban applications.

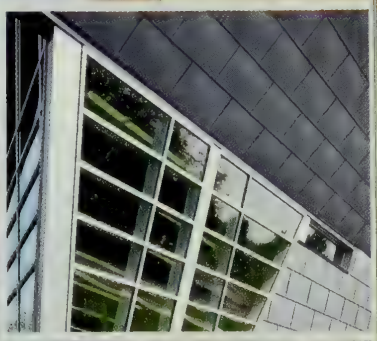
Wind can't be supplied continuously the way fossil fuels, such as coal, can be fed into a furnace. When the wind doesn't blow, there is no energy produced. However, it doesn't take a lot of wind to run a turbine, and more and more researchers are figuring out how to design ones that will operate efficiently at low speeds and in turbulent urban conditions. Imagine a gentle breeze that rustles the leaves and causes a light flag to extend, and you can imagine a wind speed of 8 to 12 miles per hour, an optimum average speed to run most turbines. But the wind doesn't blow steadily, and a turbine can't produce at top capacity consistently, anymore than fossil-fuel plants can. Typical efficiency for a wind turbine is 25 to 35 percent, compared to 65 to 85 percent for a coal plant.

There are many levels of energy independence. California leads the U.S. with five large-scale wind farms with a 2,000 mw capacity. Compare that with the Princeton, Massachusetts, wind-power plant of 250 kw that produces 1 percent of the town's need. The typical size of an individual turbine in a wind farm is in the 1.5 mw range. In Toronto, Canada, the city has deposited a 750 kw turbine on the shore of Lake Ontario to serve about 250 homes in a dense urban setting. The town of Hull, Massachusetts, has a 660 kw turbine and plans for adding a second. In North Carolina, Chris Carter, owner of the Solar Village Institute, installed half a dozen residential-scale (2.5 kw) home-power electric systems last year, and in San Francisco, Pfau Architecture is in the final stages of planning department approval for four residential-scale (1 kw) turbines for the Lick-Wilmerding High School it completed last year. In the Netherlands, Core International is test driving Turby, a building-size turbine developed in conjunction with researchers at Delft University specifically to deal with the wind patterns in urban areas.

Wind advocates have stacks of testimonials and studies that refute all the arguments against wind power, with noise, aesthetics, and bird mor-





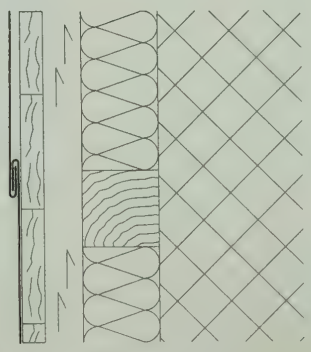




Loyalist College, Belleville, Ontario, Canada; Architect: Stephen Teeple Architects, Toronto, Ontario, Canada; Flat Lock Interlocking Wall Tiles; Fabrication and Installation: Semple Gooder, Toronto, Ontario, Canada

RHEINZINK® – The Material with a Future

RHEINZINK® is a titanium zinc copper alloy that is environmentally friendly with unmatched longevity and elegance, making it the ideal building material. With many detail variations possible, RHEINZINK complements both traditional and modern architecture. Curvilinear surfaces can be clad with ease due to the material's natural flexibility. At RHEINZINK, we take great pride in our customer support, providing technical assistance to both architects and installers. With a large number of installers throughout North America and material stocked in several states, there is never a problem with material availability.



Please visit us at
AIA Las Vegas
Booth Number 2067
(May 19th- May 21st, 2008)

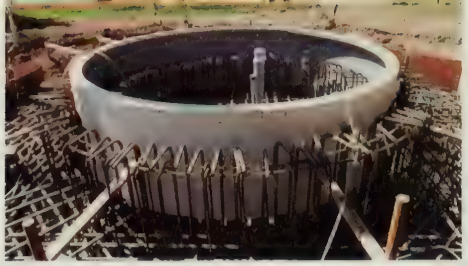
TÜV CERT DIN EN ISO 9001:2000 Zertifikat: 09 100 4348

TÜV QUALITY ZINC

ASSOCIATION FOR ENVIRONMENTALLY PROOFED BUILDING PRODUCTS NUMBER OF

RHEINZINK America, Inc., 955 Massachusetts Avenue, Suite 770, Cambridge, MA 02139
Tel. +1 (617) 871-6777, Fax +1 (617) 871-6780, E-Mail: info@rheinzink.com, www.rheinzink.com

RHEINZINK







Canada's first urban wind turbine was built by a partnership of Toronto Hydro Energy Services and the WindShare Cooperative on December 18, 2002. The turbine stands 30 stories tall and has the capacity to power up to 250 homes. Its 95-foot-long blades capture the wind, turning rotors that produce electricity. Locating wind turbines near the lakeshore allows the blades to capture the best wind production flowing over Lake Ontario with no obstructions. Electricity from the wind yields no emissions, no waste, and is 100 percent green.



tality rate perceived as the biggest drawbacks. With regard to the bird mortality, Toronto's expert ornithologist predicted, and has been proven correct, that two birds per year would be killed as a result of flying into its turbine on Lake Ontario. The Fatal Light Awareness Project (FLAP), a volunteer group in Canada with affiliate organizations throughout the U.S., cites far greater bird mortality from transmission towers and lines, domestic cats, and especially, lighted high-rise buildings. Turbines are huge, and apparently birds learn to fly around them, unlike well-lighted transmission towers and high-rise buildings, which attract birds.

Turbine noise comes from the blades passing through the air as the hub rotates, or from the gearbox and generator, which are housed in a nacelle mounted on top of the tower and attached to the rotor hub. With the new generation of turbine blade design and material and a well insulated nacelle, the noise is negligible. In Toronto, the turbine generates sound levels of 43 dBa, less than the average noise level in a home (50 dBa), a car running at 40 mph (55 dBa), or general office noise (60 dBa). So, noise is not an issue either.

Today's dilemma is not how to feed power to remote farms, but how to supply ever hungrier, densely populated areas. There is a lot of wind and open space in the middle of the country, but it's a long way from population centers. Distributed generation—putting the power sources near the centers of consumption to reduce transmission distances and costs—is the most efficient arrangement. Plenty of conventional power plants are located near urban areas, but they are not popular neighbors. In spite of a lack of open land and the erratic winds in urban areas, there is a lot of activity in the wind industry to bring pollution-free, renewable sources such as wind power into these areas.

Long Island spreads east from New York City and is just as big a power-hungry place. Sprawl has encroached on the farmlands on the east end, so there isn't a lot of open land for a wind farm. There is, however, a lot of coastline, and it is in the Atlantic Ocean south of Robert Moses State Park that Long Island Power Authority (LIPA) and its 30 collaborating organizations expects to construct a 40-turbine wind farm. The Long Island Offshore Wind Initiative (LIOWI) project has sailed fairly smoothly through rigorous public development and approval processes. It is well on its way to becoming the first offshore wind-energy park in the U.S. (Offshore farms are common in Europe, especially in Denmark, where land is scarce and ocean winds, favored for their unobstructed and consistent nature, are plentiful.) The LIOWI project will have about 40, 2 to 4 mw turbines that will generate enough power for 42,000 homes. A single cable buried 6 feet below the ocean floor will carry electricity from the turbines to a LIPA substation for distribution. Even at 200 feet tall, the turbines will blend into the haze of the horizon when located 2 to 6 miles from shore.

Not offshore, but right onshore, on a peninsula south of Boston, is the turbine in Hull, Massachusetts. Hull claims to have had a wind turbine to run its saltworks in the 1830s, but its first contemporary wind turbine was installed in 1985 and provided at least 30 percent of the power for the local high school until it was damaged beyond repair by a storm in 1996. It was replaced three years ago by a new, improved 660 kw turbine called Hull Wind I that is now three years old and powers traffic signals, streetlights, and on a windy day, 250 houses as well. Hull is now working on bringing in a second, wind-farm-size (1.5 mw) turbine. Farther inland, the town of Princeton, Massachusetts, has the distinction of having the oldest wind-power plant in the state, with eight turbines installed in 1984. In 2002, one of the old 40 kw turbines was replaced with a newer model 50 kw turbine. At 330 kw, it is hardly the scale of the Long Island project, but sufficient for a town with a population of 3,350 people.

You can't find a better example of distributed generation, where production and consumption are in the same place, than energy systems



Pilkington **Pyrodur™**

Specifically designed to meet your requirements for 20 minute applications.
The great advantage compared to the majority of other glass types in this class is that it also offers a bonus of better thermal protection during a fire.

- Available in 7 mm and 10 mm thickness
- Combinations with Low E and Solar Control glass
- Listed with Underwriters Laboratory (UL)
- Category I and II (ANSI Z97.1 and CPSC 16CFR1201)
- Short lead times through regional cutting stations

For additional information, contact TGP at 800-426-0279
or visit TGP's website at www.fireglass.com

Pilkington Fire Protection Glass NA
www.pilkington.com/fire

PILKINGTON

CIRCLE 124 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Pfau Architecture is awaiting approval for four turbines for the Lick-Wilmerding High School that the firm completed last year in San Francisco.

that are integrated into building sites. Chris Carter, who installs solar and wind systems in the Southeast, says the small-wind industry is not growing by the leaps and bounds that large-scale wind is, but that those who do invest, mostly out of conviction rather than for fast payback, become converted to rethinking energy usage in all aspects of their lives. "In home systems, I always install the meter on the kitchen wall. When people see how fast it goes around, they change their habits just as quickly." The technology is also changing quickly. According to Carter, "We use lead-acid batteries, which, although highly recyclable, are extremely heavy. There are new types of batteries on the research horizon at the Department of Energy's National Renewable Energy Laboratories (NREL). They will be made from nontoxic materials like agricultural waste, for example."

Carter has installed residential wind systems made by Wind Turbine Industries, the manufacturers of Jacobs wind turbines, one of the companies that supplied family farms back in the 1930s. The other two major American residential manufacturers are Bergey Windpower and Southwest Windpower, according to principal Dwight Long of Pfau Architecture in San Francisco. Southwest will supply four turbines for the firm's recently completed Lick-Wilmerding High School's technology and design center, located on the western side of the city, where it benefits from unobstructed winds off the Pacific Ocean. According to Long, "The local community has been extremely supportive; they think the addition of the turbines is a positive message for the neighborhood." The turbines are small at 50 feet, in keeping with the neighborhood height limitations, with a modest capacity of 1 kw each. Their function is as much a visible symbol for the school as an offset for electrical costs.

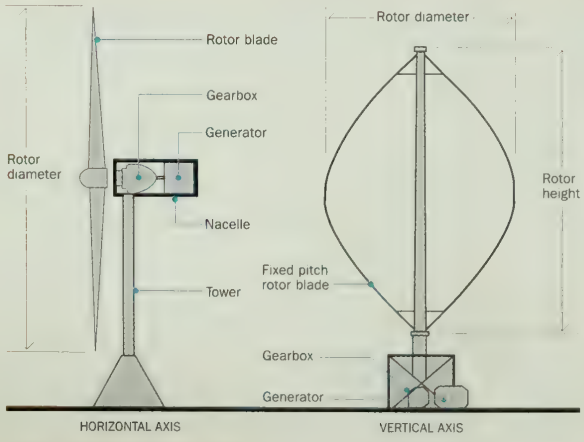
The planning department is reservedly supportive, with expected concerns for height, safety, and noise, all of which have been answered, and approvals are expected shortly. Shepherding wind turbines through local approvals is an ongoing obstacle. Gordian Raacke of Renewable Energy Long Island (RELI), one of the LIOWI partners, has made unification of codes one of his organization's priorities. "Not only are most codes unduly restrictive, the way they vary among small jurisdictions is enough to kill an industry. One of the things we are doing in Long Island is attempting to unify the codes to deal with alternate energy systems uniformly."

Lick-Wilmerding High School is located in a very dense urban environment but has characteristics of open, unobstructed sites. More typical urban settings have lower average wind speeds and complex wind flows that are, in part, a function of the buildings themselves. Right at the surface of a building, velocities may be quite high and direction changes abruptly. Turbines most typically, and all those so far described, are horizontal axis wind turbines (HAWT), in which the axis of rotation is horizontal with respect to the ground and parallel to the wind.

In the Netherlands, a team at the Technical University of Delft has been working on the design and development of Turby, a vertical axis wind turbine (VAWT) specifically for the complexities of urban conditions. In a VAWT, the axis of rotation is vertical with respect to the ground and more or less perpendicular to the wind stream. With a twist, Turby uses the principle of the well-known Darrieus vertical axis turbine. Professor Gerard J.W. van Bussel, one of the developers of Turby, explained another feature: "It was designed to be transported to a building rooftop without the use of a crane. It's a 2.5 kw turbine and weighs 90 kg (198 lbs). The heaviest part is the tower, but it is transportable in sections. You can take it up in an ordinary elevator and plug it in." The tower comes in two sizes, 16 feet (500 lbs) or 24 feet (925 lbs), which fold into sections that are no more than 7.5 feet long. It is currently installed on at least seven rooftops in Delft for final testing of the controls, which, like all contemporary turbines, are sophisticated computers. Although the group has not constructed any examples that integrate the turbine into a building design, another one of the researchers, Sander Martens, Turby's aerodynamic designer, has developed a number of design proposals that show ways it can be done to further take advantage of the higher velocities and particular conditions of wind forces at building surfaces.

The U.S. government is participating in the rapid development of the wind industry, though not nearly as substantially as most proponents say is needed. Tom Gray, deputy executive director of the American Wind Energy Association, the industry's trade organization (www.awea.org), noted the expert research undertaken in the Department of Energy's National Wind Technology Center (NWTC) (www.nrel.gov). The NWTC has set the U.S. goals and provides assistance and information through its Wind Powering America Program. On the other hand, the wind industry enjoys nowhere near the subsidies that fossil-fuel-driven plants do. And help such as the Production Tax Credit, which offers power producers a tax credit, has been allowed to expire three times since it was first enacted in 1992. At the end of 2004, it was extended again. On the individual scale, companies and individuals who produce enough renewable power that they are able to sell their excess back to the grid usually do so at the same rate they pay or, in some instances, at wholesale rates.

It will be interesting to see how wind generation will be incorporated into individual building, beyond the simple addition of a turbine in the back forty. ■



WIND TURBINE CONFIGURATIONS

Source: American Wind Energy Associaton

Two types of turbines and typical subsystems for electricity generation are shown. The subsystems include a blade or rotor to convert wind energy to rotational shaft energy; a drive train with a gearbox and generator; and a tower that supports the rotor and drive train.

PAC-CLAD®
Petersen Aluminum

Metal Roofing Panels

Mandarin Oriental Hotel
Washington, DC
Architect: Brennan Beer Gorman Monk Architects
General Contractor: Armada Hoffler Construction
Roofing Contractor: Progressive Services, Inc.
Color: Hemlock Green
Profile: Redi-Roof Batten Panel

It's difficult to improve upon the view of the Washington Monument and other icons comprising the DC skyline, but the newest landmark, the Mandarin Oriental Hotel, adds a dramatic entry to the capitol at the 14th Street Bridge.

This nine-story hotel is topped with a striking mansard roof utilizing 20,000 sq. ft. of PAC-CLAD® Redi-Roof Batten panels finished in Hemlock Green. The Mandarin Oriental is part of The Portals, a mixed-use development that is the largest project in the history of Washington, DC. Brennan Beer Gorman Monk Architects designed the luxury hotel in the French style while reflecting the city's iconic neo-classic architecture. The nearly vertical roof installation was done by Progressive Services, Inc., of Dover, PA.

Panels are corrective-leveled during fabrication to provide superior panel flatness. Our PAC-CLAD® Kynar 500® finish, covered by a non-prorated 20 year warranty, is now available in 42 standard colors on steel and 37 standard colors on aluminum.

For more information regarding our complete line of metal roofing products, please call us at 1-800-PAC-CLAD or visit our website @ www.pac-clad.com.

Petersen Aluminum

1005 Tonne Road • Elk Grove Village, IL 60007
1-800-PAC-CLAD or 1-847-228-7150
Fax: 1-800-722-7150 or 1-847-956-7968

Other Plant Locations:
Annapolis Junction, MD: 1-800-344-1400
Tyler, TX: 1-800-441-8661; Kennesaw, GA: 1-800-272-4482
http://www.pac-clad.com

CIRCLE 125 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Rethink: Wall

Instead of dividing spaces, maybe it unites them. Instead of sealing out light, maybe it welcomes it in. When you have flexible materials, a wall can be whatever you want. That's why Pittsburgh Corning Glass Block comes in so many shapes and patterns. And it's easy to install, so it's a snap to make any space luminous. Feel free to rethink. You can count on us to help you shape what's new.

At right, Lake Dallas High School, Texas
Architect: DMS Architects



To see more examples of rethinking, go to www.pittsburghcorning.com/architects. Or call 1-800-624-2120, ext. 800.

PITTSBURGH CORNING GLASS BLOCK®

Think again.

See us at AIA Booth #5156

CIRCLE 126 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Tech Briefs

Projects: A museum for contemporary art contends with a tight site and poor soils • Standards: World's largest building owner poised to spur the adoption of interoperability standards

In Osaka, an iconic entry and sculpture mark the spot of a mostly underground museum

Commissions for art museums typically focus on form and image, but for the National Museum of Contemporary Art in Osaka, Japan, the design team had to create visual appeal while also addressing an unusual set of challenges in both planning and construction.

Designed by Cesar Pelli & Associates, the 145,000-square-foot building occupies a tight, irregular site on Nakano Island, in the historic heart of Japan's second-largest city. Restrictions imposed by both the national and local governments mandated a structure that was largely underground. This condition meant the architects were doubly challenged: first, to establish a visual identity for the largely invisible institution in a crowded urban landscape; and second, to tackle a complicated below-grade construction process at a site with a high water table and no bedrock.

The design ultimately took the form of a reverse L-shape on three subterranean levels that descend 64 feet into mud and water. To give it street presence, Pelli created a glass enclosure over a ground-floor entrance vestibule, and surmounted it with two dramatically fanciful steel-tube architectural sculptures. The glazed entry could be likened to the tip of an iceberg, or the conning tower of a U-boat—indeed, the firm describes the project as "a watertight submarine for precious artifacts." A graceful steel crown nicely amplifies the glass structure's crystalline panes. The glazed entry also allows light to enter the center of the windowless structure below.

The second challenge was a technical one. The museum sits in an area of saturated alluvial soil. Pelli describes the below-grade structure, which is 10 feet thick, as "a bathtub inside a bathtub inside a bathtub." But rather than holding water, the tubs keep it at bay, resisting what is effectively a lake of aqueous silt and mud. The outermost tub is composed of massive rough-cast solid concrete walls, which keep out water and also act as ballast to resist the uplift of hydrostatic pressure. Inside this tub sits a second layer of concrete with a rubberized membrane that serves to regulate temperature and humidity and acts as a secondary waterstop. The innermost tub, finally, is composed of the interior walls of the museum. Each bathtub layer is separated by an airspace.

The museum required an atypical construction method. Rather than following the usual practice of excavating and lining a huge pit and building from the foundation upward, the museum was constructed from the top down, one floor at a time. This reduced the amount of temporary waterproofing needed by avoiding the large void that typical bottom-up construction requires. Complicating matters, the 100-year flood line sits about 5 feet above street level just outside the museum, meaning it had to be designed to resist yet another form of water pressure. Accordingly, the lower portion of the glass enclosure was constructed with panes that are a beefy 2.5 inches thick.

Descending from the grade-level lobby bridge, patrons first arrive at a public space containing a ticketing and information area, a restaurant, gift shop, auditorium, and video exhibit. This floor also houses administrative offices. The next level down is devoted to temporary exhibitions, and the lowest floor houses the permanent exhibition galleries and curatorial spaces. A long escalator-and-stair run ties the four levels together.



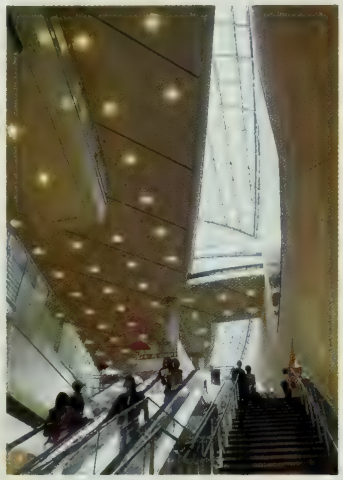


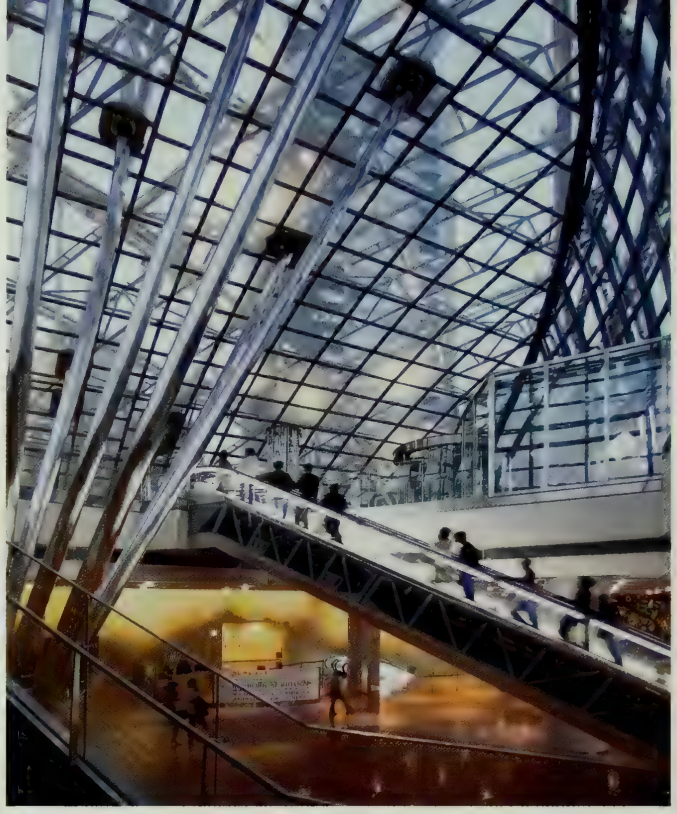
An intricate steel sculpture spreads its wings above the entry of Osaka's National Museum of Contemporary Art (above). Most of the museum is underground, though the entry adds razzle-dazzle to a dense urban site, especially alongside a nondescript science museum (at right in photo below).

Flying on wings of steel

Aesthetically, the most striking feature of the project is the above-ground sculpture announcing the museum's presence and purpose. The long, horizontal element, densely woven and resembling a roller coaster, wraps around the lobby but also extends beyond it on each side to a length of 230 feet. The tall portion, lighter than the horizontal one, resembles a pair of wings and reaches 170 feet into the sky. These were designed neither on paper nor on a computer; instead, the form was worked out "intuitively, visually, and by a sense of feel," says Pelli's partner Fred Clarke, by building an immense physical model 8 feet long, 4 feet wide, and more than 6 feet high. The firm soldered together large brass tubes to create this "analog" representation of the sculpture. The model was then digitized through photography and profiling with a laser reader.

Initially, Pelli wasn't sure whether the sculpture piece should be vertical or horizontal, so the design team developed both alternatives and presented them to the museum's then-director Shigenobu Kimura.





The glazed entry (above) boosts the museum's street presence, and also allows light to reach the subterranean floors (left).



For Specialty Doors, we've got your winning hand.

OVERLY DOOR COMPANY

Phone: 1-800-979-7300
Fax: 724-830-2871
E-mail: overly@overly.com
Web: www.overly.com

Phone: 1-888-891-4416
Fax: 402-346-0561
E-mail: info@tigerdoor.com
Web: www.tigerdoor.com

TIGER Door, LLC

CIRCLE 127 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

A visionary client who encouraged inventiveness throughout the project, Kimura liked what he saw and asked Pelli to incorporate both versions.

Detailing and building these structures wasn't simple. The tall wings rise up through the museum's full height, penetrate the panes of the glass enclosure, and then reach up high into the open air. Inherently flexible, they were expected to move several inches under wind and seismic forces. Accordingly, the design team fitted them with special rubber gaskets (to prevent hard contact) and heated collars (to prevent humidity condensation) where they passed through the glass. The titanium-coated, stainless-steel tubes were shop-fabricated and assembled, then disassembled and shipped to the site, where they were finally reassembled and installed. Interestingly, the subcontractor who built the sculpture was not a building-industry firm, but rather a pipeline constructor. Pelli says, "The execution of these sculptures required extremely sophisticated technology. The contractors put their souls into it, and did it very well." *John Pastier*

GSA asks for guidance on using digital building models for design and construction

Proponents of building information modeling (BIM) and software interoperability may soon get a boost from the world's largest building owner. The General Services Administration (GSA) recently solicited the AEC community to provide information about BIM, such as case studies and best practices, with an eye toward improving project delivery and possibly creating new standards for submitting design information to the agency.

Specifically, GSA asked for feedback on using Industry Foundation Classes (IFCs), the standards for electronic-data exchange created by the International Alliance for Interoperability (IAI). [Editor's note: RECORD publisher McGraw-Hill was a founding member of IAI and plays an active role in its leadership.] The IFCs are a set of definitions for building elements (e.g., walls, doors, and floors) and their properties and relationships (e.g., doors are built into walls), which were developed to ease the sharing of digital design information among different, proprietary software programs. The IAI, founded in 1995, has long maintained that a lack of data standards lowers the AEC industry's productivity because building information can't be shared easily among multiple parties.

GSA's solicitation came on the heels of one of the first studies aimed at quantifying the extent of these productivity losses. Last fall, a report issued by the National Institute of Standards and Technology (NIST) estimated that poor interoperability cost the industry $15.8 billion in 2002.

Though some cast doubt on NIST's estimates, and others question the specifics of the IFCs themselves, few doubt the need for better methods for sharing data. So far, the major CAD companies and several other software vendors have pledged, at least in principle, to make their products compatible with IFCs. Overall, though, the industry has been slow to embrace standards, and it seems more likely that owners like GSA would drive their adoption, as has been the case with other technology-based management solutions, such as Internet-based project Web sites.

Although the deadline for formal feedback about IFCs has passed, questions and requests for information about the GSA solicitation can be sent to ifc.bim@gsa.gov. *Deborah Snoonian, P.E.*



illbruck
Architectural Products

Contemporary flair.
Sound economics.

Get a beautiful ceiling with exceptional acoustical control at an attractive price.

HARMONI™ Ceiling Tiles are made with illbruck's patented willtec® acoustical material. They're lightweight, easy to install, fire-retardant and mold-resistant. And HARMONI tiles absorb 90% of sounds directed toward them making them ideal for classrooms, offices, conference rooms, home theaters, corridors and other noisy interiors.

Choose the smooth VISTA pattern or softly sculpted TARTAN style with a white, almond, black or grey Hypalon® coating.

illbruck offers a wide range of attractive acoustical products including FABRITEC™ Wall Panels, SONEX® Panels and Baffles, CONTOUR® Ceiling Tiles, SQUARELINE® Metal Ceiling Tiles and more. Get the ceiling you dream of for less than you'd imagine.

1-800-662-0032
www.illbruck-archprod.com/ceiling
sales@illbruck-archprod.com

© 2005 illbruck, inc. illbruck and the illbruck logo are registered trademarks of illbruck inc. All rights reserved

128 ON READER SERVICE CARD OR GO
ECORD.CONSTRUCTION.COM/PRODUCTS/

SLOAN VALVE COMPANY
PRESENTS



Low-consumption solar-powered faucet with an integrated power plant storage cell transforms light from any source into electrical energy.

Factors For Achieving Water Conservation Excellence:

Why—and What—Today's Architect Should Know About Plumbing and Its Relationship to Sustainable Design

Plumbing is one of those areas that architects rarely touched upon except in terms of design influence. Either relegated to the interior designer or engineer for the system specifications, plumbing as a "category" rarely crossed the architect's thought process as a major factor of design importance—until now.

What has changed dramatically is the growing awareness of water itself as a most precious resource, and the one resource most taken for granted. As we collectively grow in our awareness of water's scarcity, the architect finds issues of water as not only part of his decision-making process; his role as "master builder" thrusts him into the center of the efforts to save this resource. Thus, more than in the past, architects must not only familiarize themselves with an increasing variety of issues outside the scope of a building's structure; they must further tackle water's issues and water's relationship to sustainable design.

This article deals with the water resource, water conservation, and the factors that influence an architect's design strategies such as hands-free hygienic plumbing. It will familiarize the architect with the growing possibilities which exist today to conserve this resource, how to gain LEED® points, and how to use LEED calculations to achieve Water Use Reduction requirements. In addition, it will help the architect gain an understanding of the benefits extended to the sustainable design when water conservation is practiced.

Why the Focus on Water?

While traditionally much attention has been focused on controlling or conserving energy costs, controlling water costs has now become an objective due to growing population and limited fresh water supplies to meet the demand. For example, in the Southwest and the Pacific Northwest, freshwater sources are rapidly diminishing, spawning innovative methods of water conservation and improved management of the natural water-cycle. According to the U.S. Department of Energy, rising water and sewage costs average approximately $4.00 per 1,000 gallons across the United States—a pace expected to be two percent greater than inflation.

From the architect's point of view, these trends impact the entire "green design phenomenon," and ultimately, the design of structures themselves. When the point of view of

CONTINUING EDUCATION

Use the learning objectives below to focu your study as you read **Factors For Achieving Water Conservation Excelle Why—and What—Today's Architect Should Know About Plumbing And Its Relationship to Sustainable Design.** To earn one AIA/CES Learni Unit, including one hour of health safety welfare credit, answer the questions on page 291, then follow the reporting instructions on page 380 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Understand the architect's role in water conservation*
- *Recognize what is required to earn points for LEED-NC Water Efficiency Credit 3*
- *Understand how to calculate Baseline and Design Case indoor water consumption*

preserving our most precious resource is folded into other design considerations, it becomes imperative to know where water is being consumed in different types of buildings. In other words, to create an effective plan that addresses water conservation, the architect's role spills over into water management issues as well as structural issues.

The North Carolina Department of Environment and Natural Resources' Division of Pollution Prevention and Environmental Assistance offers this information about domestic water use: consumption by lavatories, water closets, urinals and showers accounts for the largest amount of consumption for office buildings, schools/universities, hotels/motels and healthcare facilities. Each of these types of buildings consumes more than 40 percent of their total water balance in the restroom. Controlling this consumption should be a high priority of today's architect. As costs for potable water continue to escalate over the next few years—influencing the bottom-line in ways it never has in the past—implementing water-efficient designs that reduce that need will save money and resources in the years to come, and result in a more sustainable structure.



Available in hardwire or battery-operated models, low-consumption, 0.5 gpm self-adaptive electronic faucets are designed to promote hygiene and handle heavy traffic.

Schools

For example, more than 50 million children and six million adults enter public schools each day during the school year. The actual water needed to meet that daily demand is staggering; what makes it more compelling is that the average school building is over 40 years old. In 2003, over $48 billion was spent on construction in this marketplace, and as schools today face a shortage of funding and a lack of awareness of what sustainable designs can do for facilities, the role of the architect is further enhanced by having a unique education-oriented environment within which to practice conservation. Movements toward sustainable schools are well developed in some areas, but many areas still practice old techniques, thus missing the opportunity to impact a large consumer of the domestic water supply.

Hospital and Healthcare Facilities

Consider the unique requirements of many of our hospitals and healthcare facilities. These buildings are similar to "mission critical" buildings in that they operate 365 days a year, and incorporate equipment that consumes vast quantities of energy and water. In thinking about sustainable design, architects should consider the ASHE (the American Society of Healthcare Engineers) guidance statement from 2002 that focused on the holistic nature of sustainable design: "Local air and water quality is also significantly affected by building design choices. Off-gassing building materials and finishes, construction equipment and HVAC systems directly emit VOCs, particulates and other materials that can result in the formation of ground level ozone (smog), and cause allergic attacks, respiratory problems and other illnesses. Land use and transportation planning, landscape and water management on the grounds and water conservation efforts within the building will influence the amount of toxic emissions released to the water and air throughout the life of the building."

Consequently, it isn't just a "water" decision, but *a building decision* the architect faces when confronting sustainable design with water conservation as a goal. Water-efficient design strategies actually balance water quality and quantity demands within a building. Architects must, therefore, take a "systematic look to identify potential water sources, how water is used in the building and how it flows around the building site to reduce water usage and wastewater discharges"—good advice in today's water-conscious environment.

Enter LEED®

One of the major forces raising awareness of sustainability and environmentally responsible design is the LEED® Green Building Rating System. LEED has become the most influential driver for green buildings, and includes a section that rewards water conservation efforts. The overall LEED system helps project teams determine environmental goals, identify green design strategies, measure and monitor progress, and document successes.

A product of the United States Green Building Council, LEED for New Construction (LEED-NC) provides a menu of green building measures in six major categories:

- Sustainable Sites, which includes credits for controlling erosion as well as considerations to reduce overall site disturbance.
- Energy and Atmosphere, which includes credits for optimizing energy performance and incorporates credits for use of renewable technologies.
- Materials and Resources, which offers credits for a range of sustainable designing strategies including the use of recycled building materials.
- Indoor Environmental Quality, which includes ways to establish minimum indoor air quality performance and occupant comfort and health.
- Water Efficiency, which includes ways to maximize water efficiency both in outside irrigation as well as indoor water usage.
- Innovation and Design Process, which addresses design measures not covered in the other five categories.

For the Water Efficiency category, the U.S. Green Building Council offers up to five LEED-NC credits: two for reducing potable water use for irrigation; one for reducing potable water use for sewage conveyance; and two for reducing potable water use inside a building. The last two credits, which comprise LEED-NC Water Efficiency Credit 3, are dedicated to reducing potable water use within the building.

Using LEED for Water Conservation

The architect must consider methods to reduce potable water use that go beyond the Energy Policy Act of 1992 (EPAct). Such methods include reusing roof runoff for non-potable applications, installing sensors and flow restrictors on water fixtures, installing dry fixtures, and other innovative methods. Such methods have a profound effect on the environment, and include:



Easy to install and ADA-compliant waterfree urinals feature a biodegradable sealant liquid for an odor-free and vandal-resistant environment.

- Environment. Water reduction benefits the total amount withdrawn from rivers, streams and other water bodies. In addition, such reductions reduce energy use and chemical inputs at municipal water treatment facilities. Conserving water can also minimize the frequency of outflow events (in a combined sewage system, raw sewage is discharged when the system breeches capacity).
- Economic. Water reductions minimize building operating costs, and lead to a more stable tax and water rate, as well as delaying water treatment facility expansions.
- Community. Water reductions save water for future generations. In addition, water reduction allows the community to grow without overburdening its water system.

The architect's design strategy should include all water consuming fixtures, equipment, and seasonal conditions related to the structure, as well as specifying fixtures that exceed the Energy Policy Act of 1992. These include waterfree urinals, low-consumption toilets such as pressure-assist 0.8 gallons per flush (gpf) models, low-flow faucets and showers, and electronic Flushometers and faucets.

For example, waterfree urinals are now readily available in the marketplace and use no water for flushing. In certain applications, these fixtures represent ideal solutions to achieve water conservation goals. In other applications, toilets that use less than 1.6 gpf offer the architect extraordinary opportunities to achieve sustainable objectives (e.g., 0.8 gpf pressure assist).

Making Your Calculations

The intent of the Water Use Reduction section of LEED-NC is to maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems. Architects achieve this by employing strategies that in aggregate use 20% or 30% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.

To meet Water Efficiency Credit 3.1, the architect must submit the following:

- The LEED Letter Template, signed by the MEP engineer or responsible party (including the architect) declaring the project uses 20% less water than the baseline fixture performance requirements of the Energy Act of 1992; and,
- The spreadsheet calculations demonstrating that water-consuming fixtures specified for the occupancy and use of the building reduces occupancy-based potable water consumption by 20% compared to the baseline conditions.

To meet Credit 3.2, requirements are the same as above, except instead of 20%, it is a 30% reduction. These could be considered "affordable credits," in that the cost of water-efficient equipment is on par with standard fixture expenses.

One can immediately see the importance of *establishing a baseline calculation* in order to fulfill these requirements. The baseline calculation will be the same as the water conservation *design calculations* (those used to show LEED qualification), except that for the baseline, ALL fixtures are assumed to be performing according to Chart 1 (1992 Energy Act).



Low-consumption 0.8 gpf pressure-assist toilets maximize water delivery force to provide excellent performance often out-performing gravity 1.6 gallon units.

Chart 1: Fixture Flow Requirement Ratings of Energy Policy Act of 1992

Fixture	Flow Req.
Water Closets	1.6 gpf
Urinals	1.0 gpf
Showerheads	2.5 gpm
Faucets	2.5 gpm
Replacement Aerators	2.5 gpm
Metering Faucets	0.25 gal/CY

NOTE: Flowing water pressure of 80 psi

To better understand the calculation methodology, let's assume a one-story building, with two restrooms. The men's room has two urinals, and two closets. The women's restroom has four closets. Each restroom has two sinks with a manual faucet on each sink. There are 100 people who occupy the building during office hours: 50 men, and 50 women.



Stain-, chemical- and heat-resistant solid-surface lavatory systems with low-consumption sensor-operated faucets are easy to maintain and provide hands-free, hygienic operation.

Creating the Baseline

Create a spreadsheet listing each water-using fixture, and the frequency of use data. Frequency of use data includes number of female and male daily uses, duration of use, and the water volume use. There is no set criteria for determining daily use or duration of use, so architects can estimate these items based on the project's program requirements. These values are used to calculate the TOTAL POTABLE WATER used for each fixture type and gender. Use EPAct fixture flow rates for the baseline case. Do not change the number of building occupants, work days or frequency data from baseline to design case. In addition, graywater or rainwater harvest volumes must not be included in baseline calculations.

The baseline calculations offered in this example show the architect an easy way to accomplish the LEED-NC objective of preparing a baseline, and ultimately, the objectives of the LEED-NC credit for Water Use Reduction. For example, LEED-NC v2.1, which is the basis of this approach, requires submittal of the LEED letter templates, which calculate, based on the occupancy of males, females and fixture type, the TOTAL ANNUAL POTABLE WATER VOLUME for the building. In this calculation, the baseline yields a total usage of 157,950 gallons (Chart 2).

Note that we have estimated the daily use and duration of use for each fixture in this building. LEED-NC specifically states that these criteria are not set; therefore, the architect is required to set them, and usage patterns can be determined in many ways (e.g., working with the owner, talking with occupants, etc.).

Calculating the Design Case

In calculating the Design Case (the specific changes being proposed to this building from a water conservation point of view), we must *not* change the number of building occupants, the number of work days, or the frequency data.

For our Design Case, let's assume the following:

1) Waterfree urinals will be used.
2) 0.8 gpf pressure-assist water closets will be used.
3) Electronic faucets with low-flow aerators (0.5 gpm) will be used. Plus, the electronics have been factored as reducing sink duration by 20% (to 12 seconds). However, electronic controls on water closets do not receive a reduction in duration, as they are fixed-volume devices (e.g., 0.8 gpf). NOTE: The 20% reduction can be found on page 105 of Reference Guide LEED-NC v2.1. Furthermore, university studies have been conducted into water savings of electronic versus manual faucets.

The calculations shown in Chart 3 use the above fixture types. You can see that a 69% reduction in annual water use for the building is achieved—far greater than the 30% reduction required for this LEED-NC credit. In fact, Water Efficiency Credits 3.1 and 3.2 are cumulatively achieved.

CHART 2: BASELINE CALCULATIONS

Daily Uses	Fixture Type	Duration (flushes); faucets shown in minutes	Flowrate (gpf); faucets shown in gpm	Water Use (gallons)
50	Men's Water Closets	1	1.6	80.00
150	Women's Water Closets	1	1.6	240.00
100	Men's Urinals	1	1.0	100.00
300	Conventional Sinks	0.25	2.5	187.50
	Daily Total			607.50
	Annual Work Days			260
	Total Annual Volume (gallons)			157,950

Assumptions: Males use urinals twice per day; closets once per day; females use closets three times per day. Both males and females use faucets three times per day.

CHART 3: DESIGN CASE CALCULATIONS

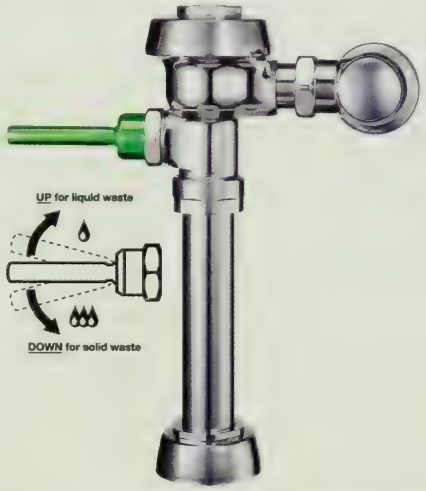
Daily Uses	Fixture Type	Duration (flushes); faucets shown in minutes	Flowrate (gpf); faucets shown in gpm	Water Use (gallons)
50	Men's Water Closets (ultra low flow)	1	0.8	40.00
150	Women's Water Closets (ultra low flow)	1	0.8	120.00
100	Men's Urinals (water free)	1	-	-
300	Conventional Sinks	0.2	0.5	30.00
	Daily Total			190.00
	Annual Work Days			260
	Total Annual Volume (gallons)			49,400

Assumptions: Males use urinals twice per day; closets once per day; females use closets three times per day. Both males and females use faucets three times per day.

The architect is in a position to do "what if" scenarios using these simple calculations, with usage factors taken into consideration. It is always helpful, as well, to consult with manufacturers who have such usage data, and who can provide LEED assistance.

Real Results from LEED

The fact is, water efficiency measures in commercial buildings can easily reduce water usage by 30% or more, according to the USGBC. In a typical 100,000-square-foot office building, low-flow fixtures coupled with sensors and automatic controls can save a minimum of one million gallons of water per year, based on 650 building occupants each using an average of 20 gallons per day. As demonstrated in the example above, the standard toilet fixture uses 1.6 gpf and the standard urinal consumes 1.0 gpf. Design strategies using equipment such as 0.5-gpf urinals, as well as waterfree urinals or dual-flush toilets, can significantly impact usage and maximize water savings. All of these should be included in the architect's conservation strategy.



Dual-Flush toilets allow the user to select a full flush (1.6 gallons per flush) or reduced flush (average 0.8 - 1.1 gallons per flush).

Taking conservation further, showers installed for those who commute by bicycle or for others who work out during lunch, can be fitted with low-flow 2.0-gallons-per-minute (gpm) showerheads and sensor-operated lavatory faucets with 0.5-gpm aerators, providing maximum water savings. Or, for example, in universities and schools, where efficient transportation is combined with sports activities, such shower strategies can deliver significant dividends in water savings.

To attain the highest possible LEED-NC rating, all water-consuming fixtures should be selected for their capacity to conserve water and provide durability for long-lasting service. The more a product can maintain the habits of a population while conserving energy, the more a product will be accepted by the population itself. In general, products that conserve without sacrificing performance will be in greater demand than those that give up performance in favor of efficiency. For example, low-flow pressure toilets and 0.5-gpf urinals reduce water consumption without sacrificing performance.

Measures taken to achieve Water Efficiency objectives can overlap into other LEED-NC categories. Knowing the products and understanding the intent of the LEED-NC criteria can maximize point-earning potential. For example, low-flow 0.5 gpf urinals contribute to achieving water efficiency goals. Additionally, the urinal Flushometer may be manufactured from recycled content, and the fixture may be regionally manufactured.



Low-consumption solid brass showerheads with self-cleaning, spring-loaded spray disks produce a cone-within-a-cone spray pattern.

Retrofit Applications

As more building owners are now choosing to reinvest in existing structures, plumbing retrofits are becoming more common and attractive to allow for accessibility, provide increased hygiene, and decrease water consumption. This reinvestment trend has led to the development of LEED standards for existing buildings to document the higher levels of efficiency and address the operation and upgrades of existing buildings that do not fall under the category of major renovation.

LEED for Existing Buildings (LEED-EB) provides architects the opportunity to market their services to owners and operators of all existing buildings by explaining the financial and environmental benefits of sustainable facilities. LEED-EB covers a significant market with more than 4.6 million buildings in the United States already standing and billions of square feet of existing space that would benefit from the green design approach.

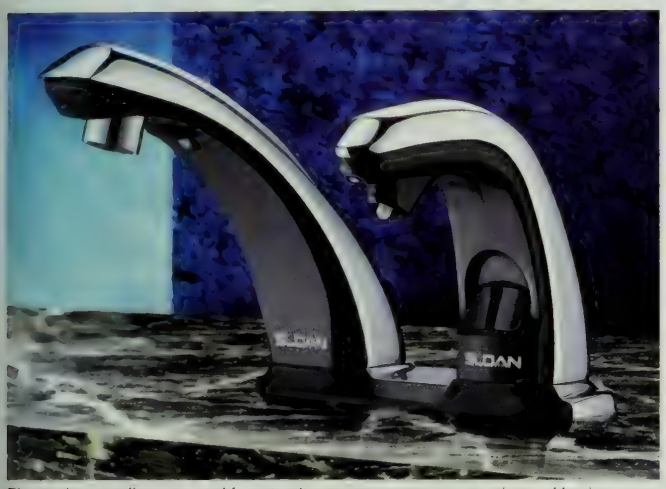
For these existing buildings, one of the first elements to examine to earn LEED points is the restroom, specifically, flushing technologies. The advantage of retrofitting old Flushometers is that products have vastly improved in terms of water efficiency over the past few decades. There have been advancements in electronic products, whereby the solenoid, which initiates the flushing sequence, is isolated from the water source for more reliable operation. There are also generational improvements to sensor technology, which can now identify users more consistently, ensuring a single flush per use instead of multiple flush, which wastes water. Sensor products meet the intent of sustainable design, in that they provide a hygienic hands-free bathroom environment, lessening cross-contamination and spread of germs in the workspace.

While older Flushometers can use more than three gallons a flush, waterfree urinals, which connect directly to existing drain lines for simple retrofit applications, consume no water to maximize conservation efforts without sacrificing hygiene. Waterfree urinals use a liquid-seal to form a barrier between the open air and urine, which prevents any odors from escaping from the drain line. Independent research studies have shown waterfree urinals have less bacteria per square inch than standard water-fed urinals, providing a hygienic and odor-free environment.

Other retrofit options include upgrades of manual units into touchless models with kits that flush electronically. Both side-mounted and integral top-load modules are available and provide the same advantages of new, touchless products that are "right out of the box."

The Hygiene Benefit

When evaluating water conservation strategies, the architect should consider factors such as the type of facility and the number of people who will have access to specific restrooms. One important benefit from sensor technology is hygiene, which directly affects the building in terms of tenant satisfaction and occupancy rates. Often, hygiene is considered separately instead of a by-product of product specification. In actuality, they are related.



Electronic soap dispenser and faucet units promote water conservation and hygiene.

Touchless, sensor-operated fixtures, for example, are the best solution to providing a hygienic atmosphere in healthcare and educational facilities because plumbing fixtures operate in damp environments, which are prime breeding grounds for bacteria. As pointed out, LEED allows for a 20% reduction in lavatory and sink use durations when sensor controls are installed. It also helps meet the intent of the Indoor Environmental Quality (IEQ) section of LEED-NC, which seeks to protect building occupants from harmful environmental conditions, and improve comfort and well being. Certainly, preventing the spread of germs by using sensor controls helps to promote hygiene and all of hygiene's subsequent benefits (more productivity, fewer sick days, etc.).

The Centers for Disease Control and Prevention (CDC) reports that hand washing is the single most important means of preventing the spread of germs. It is the first line of defense for infectious diseases, including respiratory infections and gastrointestinal disorders, among others. In fact, after using a public restroom, a single hand can have a bacteria population of 200 million, according to the CDC. Nevertheless, it takes just seconds to re-contaminate after washing by touching dirty faucets, soap dispensers and then finally, towel dispensers—something the general public is increasingly aware of now.



Stainless steel wash stations with an adjustable above- or below-deck thermostatic mix valve allow for hygienic, low-consumption operation with minimal maintenance.

The use of touchless faucets is so important (and logical) to ensuring a hygienic atmosphere that it is the single design specification for scrub sinks for operating rooms, according to the Association of PeriOperative Registered Nurses (AORN), the leader and expert on patient safety in surgical settings. "In general, there is only one specific feature we recommend for surgical scrub sinks: that it allows hands-free operation," says Ramona Conner, RN, MSN, CNOR.

Sensor-operated faucets also increase hygiene in public and semi-private restrooms, such as in hospital rooms. That's because the dirtiest area in the bathroom, as far as germs are concerned, is the sink itself. A research study on public restrooms titled *"Enteric Bacterial Contamination of Public Restrooms"* showed that total coliforms (aerobic bacteria found in the colon or feces) were present on 17.3% of the 248 surface samples taken from hospitals. Sink drain surfaces resulted in positive samples of coliforms 80% of the time, followed by the rim of the sink 20% and then the area under the soap dispenser 10%. The reason for this is that when a person washes, bacteria are shed from the hands and collect in the sink area.

There is also a conservation advantage for sensor-operated plumbing fixtures that save a significant amount of water. Based on the assumption that both manual and sensor-operated faucets flow 2.2 gpm, and users follow the minimum Food and Drug Administration's Food Code hand washing procedure that recommends pre-rinsing for 4 seconds, scrubbing for 20 and then finishing with a final rinse of 4 seconds, sensor-operated faucets would save 1.057 gallons of water per hand washing. This savings is realized because sensor-operated faucets are "turned off" unless a user's hands are in the "active area," while manual faucets continue to flow while users lather their hands. These savings can add up even further with faucets that use 0.5 gpm aerators.

The final step to hygienic hand washing is drying, but again, touching contaminated surfaces to retrieve towels can negate the effects. That's why touchless, forced-air dryers are ideal for maintaining highest levels of hand hygiene. In fact, research by the Mayo Clinic (Effects of 4 Hand-Drying Methods for Removing Bacteria From Washed Hands: A Randomized Trial, *Mayo Clinic Proceedings.* 2000; 75:705-708) states that warm air drying ranks the highest (best) when compared with other methods of drying when bacterial samples were taken after drying hands. The clinical trial declared "the forced warm air method as the best method for removing bacteria from the washed hand."

In fact, additional water waste can be accounted for in applications with manual faucets because water may continue to run when the user reaches for a towel to dry their hands or use the towel as a buffer between hand and fixture to turn off the faucet and avoid re-contamination. Also, because users are now accustomed to sensor-operated faucets, manual faucets are often left running out of habit.



Advanced electronic hand dryers dry hands in 10 to 15 seconds and use 80% less energy than traditional hand dryers while providing a 90% savings vs. paper towel costs.

Conclusions

Architects have a variety of tools at their disposal to achieve water conservation objectives. In a recent survey of building owners and managers, participants were asked which areas of the building they thought had the greatest potential to negatively affect a visitor's impression of their facility if not properly maintained or updated. The second most cited area was the restroom. In fact, restrooms were judged the most frequently visited common area of the building by employees and/or visitors alike.

It makes good design sense to take advantage of new strategies that promote water conservation because they benefit both the bottom line and the environment. In fact, owners of LEED-certified buildings receive financial incentives in terms of return on investment. In October 2003, California's Sustainable Building Task Force released a 134-page report titled, "The Costs and Financial Benefits of Green Buildings," which confirms the economic viability of "green buildings" as an investment. The report states, that on average, a normal increase in up-front costs of two percent to achieve "green design" will result in life cycle savings of 20 percent of the total investment—10 times the initial investment.

Today's architect has the opportunity to take water conservation to the next level—and help their owner-customers achieve realistic results. ■

The Promise of Dual Flush

A recent development that holds promise of water conservation is Dual-Flush technology. Dual-Flush toilets allow the user to select a full flush (1.6 gallons per flush) or reduced flush (average 0.8 - 1.1 gallons per flush). Australia is the second driest continent on Earth, and a country where the need for water conservation is understood throughout the population. It has been using the product for years, having mandated Dual-Flush technology in all residential applications, which has greatly impacted the demand on local water supplies.

The latest information on its performance and acceptance is a pilot program conducted in Canada using Dual-Flush toilet technology in residential, commercial, and institutional settings. The Canadian study, conducted by Canada Mortgage and Housing Corporation in partnership with 12 municipalities, monitored water consumption, toilet performance, and customer satisfaction with the Dual-Flush system. The Dual-Flush performed well based on water consumption rates, saving an average of approximately 26% percent more water than standard 1.6 gpf fixtures.

Until now, Dual-Flush was only available in residential "tank" style fixtures. Many designers have been so eager, they've actually used these fixtures in a commercial application. Recently, a new Dual-Flush Flushometer was introduced which will bring the advantages of Dual-Flush to a wider range of commercial projects. Related to LEED, the product will count towards water use reduction credits and help a design team get the points for water efficiency. The new Dual-Flush Flushometer will effectively reduce water use on the toilet by an average of 26% according to the Canadian study. A well performing 1.6 gpf fixture is recommended for use with the new Dual-Flush Flushometer—the product is also available as an easy retrofit to existing fixtures making the water reductions available to older projects.

List Of Works Consulted

"Guideline for Hand Hygiene in Health-Care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force," Centers for Disease Control and Prevention, MMWR 2002; 51 (No. RR-16).

National Center for Health Statistics. Vital statistics of the United States. 119th ed. Washington: U.S. Census Bureau. Statistical abstract of the United States; 1999

"Microbiological Hazards of Household Toilets: Droplet Production and Fate of Residual Organisms," American Society for Microbiology, Applied Microbiology, Aug. 1975, Vol. 30, No. 2, pp. 229-237.

"Comparative surface-to-hand and fingertip-to-mouth transfer efficiency of gram-positive bacteria, gram-negative bacteria and phage," Journal of Applied Microbiology, Oct. 2002, Vol. 93, No. 4, pp. 585-592.

"Effects of 4 Hand-Drying Methods for Removing Bacteria From Washed Hands: A Randomized Trial," Mayo Clinic Proceedings. 2000; 75:705-708.

"Estimated Use of Water in the United States in 2000," U.S. Geological Survey Circular 1268, U.S. Department of the Interior, U.S. Geological Survey, Susan S. Hutson, Nancy L. Barber, Joan F. Kenny, Kristin S. Linsey, Deborah S. Lumia, and Molly A. Maupin.

"Water Efficiency: Sound Principles of Water Management," North Carolina Department of Environment and Natural Resources' Division of Pollution Prevention and Environmental Assistance.

"Urban Nonresidential Water Use and Conservation. In: Water-Use Data for Water Resources Management," pp. 371-380, (Eds) M. Waterstone and R. J. Burt. Proceedings of the 1988 Symposium of the American Water Resources Association, Tucson, AZ. August 1988.

"The Costs and Financial Benefits of Green Buildings," California Integrated Waste Management Board, California's Sustainable Building Task Force.

"Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis," Annual Supplement to Laura I. Schultz NIST Handbook 135 and NBS Special Publication 709, Amy S. Rushing, Sieglinde K. Fuller, April 2004. American Society of Healthcare Engineers, Green Healthcare Construction Guidance Statement, January 2002.

"Construction Expenditures Branch of the Manufacturing and Construction Division," U.S. Census Bureau

American School and University Magazine

"Estimates of School Statistics 2004," National Education Association, May, 2004

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series

LEARNING OBJECTIVES

- *Understand the architect's role in water conservation*
- *Recognize what is required to earn points for LEED-NC Water Efficiency Credit 3*
- *Understand how to calculate Baseline and Design Case indoor water consumption*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 380. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Record's* website—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. What section of LEED-NC is designed to maximize water conservation within a building?
 - **a.** Sustainable Sites
 - **b.** Material Resources
 - **c.** Water Efficiency
 - **d.** Energy and Atmosphere
2. What policy is used to determine a building's baseline potable water volume usage?
 - **a.** ASHRAE/IESNA 90.1-1999
 - **b.** EPA's Guidance Specifying Management Measures for Sources of Non-Point Pollution in Coastal Waters (EPA 840-B-92-002 1 93)
 - **c.** EPAct 1992
 - **d.** ASHRAE 62-1999
3. If you reduce the indoor water use by 30%, how many LEED points would you receive?
 - **a.** 1
 - **b.** 2
 - **c.** 3
 - **d.** 4
4. What is one of the documents that must be submitted to achieve LEED-NC Water Efficiency Credit 3.1?
 - **a.** LEED letter template declaring 20% signed by MEP engineers or responsible party
 - **b.** LEED letter template declaring 30% signed by MEP engineers or responsible party
 - **c.** Installation instructions signed by MEP engineers or responsible party
 - **d.** Ownership Verification signed by MEP engineers or responsible party
5. What is the fixture flow requirement of a urinal to meet baseline performance?
 - **a.** 3.5 gpf
 - **b.** 1.6 gpf
 - **c.** 1. 0 gpf
 - **d.** 0.5 gpf
6. What must be included in your baseline potable water calculation?
 - **a.** graywater volumes
 - **b.** recycled water volumes
 - **c.** harvested rainwater volumes
 - **d.** each fixture using water volumes
7. When making Design Case calculations, which of the following can be changed?
 - **a.** number of building occupants
 - **b.** the number of workdays
 - **c.** the type of fixture
 - **d.** the frequency data
8. In the baseline calculations stated in the article, if the number of male occupants increased by 10%, which fixture' (s') water use totals would be affected?
 - **a.** Men's water closets
 - **b.** Men's conventional sinks
 - **c.** Men's urinals
 - **d.** All of the above
9. In determining the Frequency of use data, which of the following should you exclude from consideration?
 - **a.** number of female and male daily uses
 - **b.** duration of use
 - **c.** the water volume use
 - **d.** structure of the facility
10. What is the total annual potable water volume (gallons) of a one-story building in the example provided in the article for the Design Case, if the number of men increased to 75, and the number of women decreased to 25?
 - **a.** 86,060 gallons
 - **b.** 39,000 gallons
 - **c.** 78,260 gallons
 - **d.** 37,840 gallons

About Sloan

Sloan Valve Company is a single source of water-conserving plumbing systems for construction professionals across the globe. Along with its flagship Flushometer products, Sloan manufactures sensor-operated and manually activated faucets, sink lavatory systems, electronic soap dispensers, touchless hand dryers, waterfree urinal fixtures and pressure-assist flushing systems.

Recognizing a void for quality plumbing products outside the restroom, Sloan also established itself as a leading manufacturer of surgical scrub stations, showerheads and computerized plumbing control systems that regulate water use in defined locations and at specified times.

With a comprehensive line of products, Sloan remains the leading manufacturer of "green" plumbing solutions to the world market. For more information, contact Jim Allen at: Sloan Valve Company, 10500 Seymour Avenue, Franklin Park, IL 60131, www.sloanvalve.com, 800-9-VALVE-9, 800-982-5839, jallen@sloanvalve.com.

SLOAN® 800-9-valve-9
www.sloanvalve.com

CIRCLE 366 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



- PELLA'S NEW VIVID VIEW SCREEN* ALLOWS UP TO 50% MORE NATURAL LIGHT, AND UP TO THREE TIMES THE AIRFLOW.** MAYBE THAT'S WHY CUSTOMERS PREFER THEM 10 TO 1 OVER STANDARD FIBERGLASS SCREENS.***
- WHAT'S MORE, SINCE PELLA'S NEW VIVID VIEW SCREENS ARE ALL BUT INVISIBLE FROM THE STREET, THEY PROVIDE CURB APPEAL TO ANY PROJECT.
- **TO REQUEST AN APPOINTMENT FOR A PRODUCT PRESENTATION, VISIT US AT PELLA.COM OR CALL 1 800 84 PELLA.**

Pella®

*Made with GORE TRANSPARENT SCREEN FABRIC **Compared to standard fiberglass screens.
***Best appearance data from research conducted by Vernon Research Group (2003).

VIEWED TO BE THE BEST.®

CIRCLE 129 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

LLA WINDOWS
ESENTS

reater Vision:
lternate Window Materials
n Commercial Buildings

ndows are more than a view between worlds. They offer protection
d comfort, and with the right combination of materials windows
n increase energy efficiency, enhance daylighting, improve
cupant comfort, and provide low maintenance for the building
ner. The right window selection also can offer a balance between
sign, performance and budget when first and long-term costs
considered.

is continuing education program examines factors that influence
ndow selection. It focuses on six key criteria: aesthetics, price,
rgy efficiency, durability, maintenance and environmental impact.
rough comparisons of available materials and selected case studies
s unit is intended to help architects and specifiers improve their
ility to advise clients on the best window solution for their projects.
will show the options available for window styles and materials for
nmercial and institutional buildings.

ss Options

ndow assemblies consist of framing, glazing systems, hardware,
ishes, sealants, and weather stripping. The first consideration
glass and glazing options. This is a key in calculating long-term
st because of its affect on energy efficiency and building
erating expense.

Design requirements, the size of the window openings, thermal
rformance, cost, sound transmission, maintenance, durability, shading options, weather conditions and local requirements all have a bearing on selection of the glazing system.

In commercial structures, the two most commonly chosen systems are sealed insulating glass and dual glazed systems.

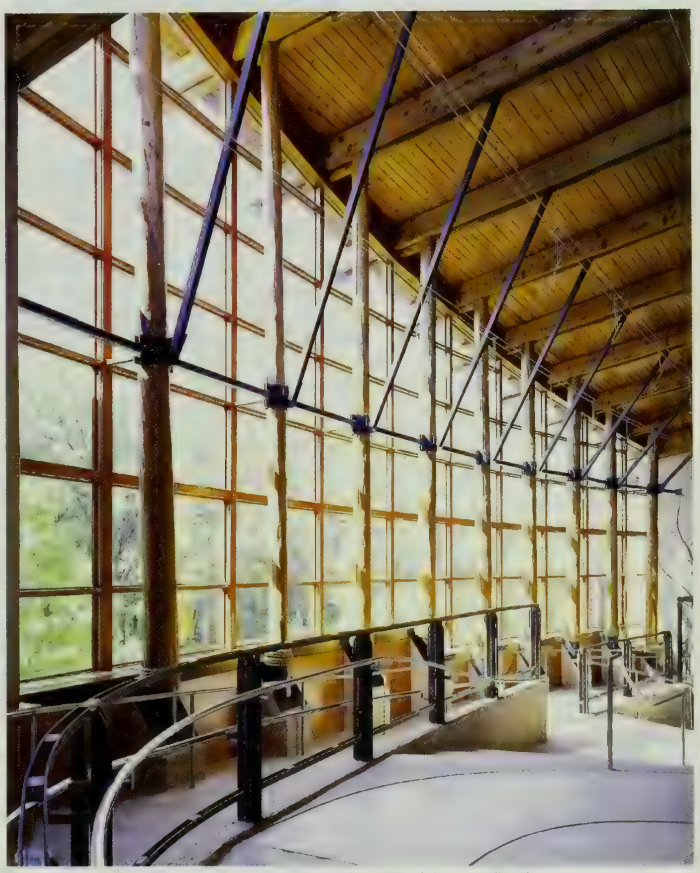
NTINUING EDUCATION

The following learning objectives will help you focus your study as you read **Greater Vision: Alternate Window aterials in Commercial Buildings**. To earn one A/CES Learning Unit, including one hour of alth safety welfare credit, answer the questions page 297, then follow the reporting instructions on page 381 or go to the Continuing lucation section on *archrecord.construction.com* d follow the reporting instructions.

ARNING OBJECTIVES

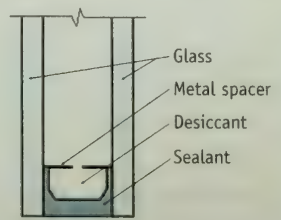
er reading this article, you should be able to:

- *nderstand window selection criteria and its impact on our projects and clients;*
- *dentify primary advantages and disadvantages of different indow framing materials in commercial buildings;*
- *ist and compare the advantages and disadvantages of sealed nsulating glass and dual glazed systems; and*
- *stablish a method to determine the most appropriate window ystem for future projects.*

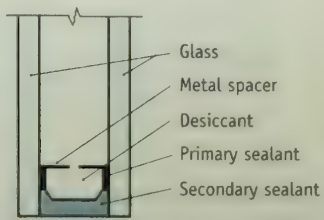


Wood-framed glazing complements the beautiful view of the woodlands at Lakeside Nature Center, Kansas City, MO, by International Architects Atelier.

Sealed insulating glass consists of two glass panes separated by a perimeter spacer typically made of metal. The sealed space between the panes may be filled with an inert gas like argon to improve the U-value of the insulating glass unit (IGU). In a single-seal system the primary sealant is applied behind the spacer. In a double-seal system, the primary sealant seals the spacer to the glass on both sides, and the secondary sealant, which is applied behind the spacer, provides the structural characteristics needed to hold the unit together. In both cases the sealant minimizes the potential for moisture intrusion and gas loss. However, when the seal in insulating glass fails, moisture appears on the internal surfaces, impairing vision through the glass and permanently damaging the insulating glass, which then must be replaced at a significant cost to the owner. Single-seal sealant systems often carry a five-year warranty against seal failure whereas double-seal systems typically come with a ten- to twenty-year warranty.



Single-seal Insulating Glass
Source: Pella Corporation



Double-seal Insulating Glass
Source: Pella Corporation



Wayland Union Middle School, Wayland, MI, by Design Plus, Inc., shows how dual glazing with between-the-glass window treatments reduces maintenance.

Dual glazing comprises two single glass panes set individually into a window frame of aluminum or wood. (Vinyl and fiberglass frames do not typically offer a dual glazing option.) Dual glazing relies on a gasket and vent system design to keep moisture out of the air space and from forming on internal glass surfaces. The space between panes of glass can vary in size to hold blinds or other shading devices and to buffer outside sound, temperature changes and wind. In most cases dual glazing systems offer a life cycle cost advantage over windows with sealed insulating glass since they are not subject to the seal failure commonly associated with insulating glass systems.

The table below shows a comparison of sealed insulating glass and dual glazing—at a quick glance, both offer similar advantages in terms of aesthetics, cost, and thermal performance. However, the IGU accommodates a wider range of fenestration types and larger glass sizes, while dual glazing offers a longer life, easier re-glazing, between-glass options, less sound transmission, and better thermal performance when between-glass blinds are included.

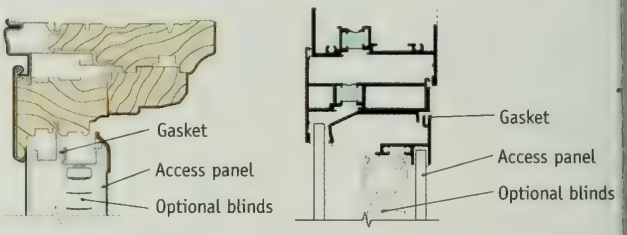
Comparison of Dual Glazing and Insulating Glass based on Selection Criteria

Glazing System Selection Criteria	Dual Glazing	Insulating Glass
Fenestration Type		+
Glass Size		+
Longevity	+	
Re-glazing	+	
Between-glass Options	+	
Thermal Performance	=	=
Thermal Performance with blinds	+	
Cost	=	=
Aesthetics	=	=
Sound Transmission	+	

Both dual glazing and insulating glass units can accommodate between-glass options such as blinds and muntins. In a dual glazing system the interior glass panel is typically designed as an access panel, allowing blinds/shades to be serviced for maintenance/repair. However, when the blinds in an insulating glass unit break, the entire piece of insulating glass requires replacement.

When blinds are excluded, the difference in cost between a window with insulating glass and one with dual glazing is negligible. The initial price of a between-glass blind is slightly higher than a room-side blind of similar quality. However, between-glass blinds do not have the future life-cycle costs associated with room-side blinds (i.e. cleaning and replacement due to damage).

When comparing insulating glass to dual glazing, the only differing acoustic factor is the air space between the panes of glass. The larger air space associated with dual glazing results in less sound transmission through the window and a sound transmission class (STC) rating at least 15% better, with additional improvements in STC as the air space increases.



Examples of Wood and Aluminum Windows with Dual Glazing
Source: Pella Corporation

When sealed insulating glass is broken, the entire unit must be replaced. However, with the large air space between the panes in a dual-glazed window, it is uncommon for both to be broken simultaneously. When the exterior pane is broken, the interior pane remains intact and provides protection or vice versa.

Thermal Performance of Insulating Glass and Dual Glazing

Glass Type	Visible light transmission	Ultraviolet light transmission	Solar heat gain coefficient	U-value of total unit
Clear insulating glass	81 %	56 %	0.76	0.54
Clear dual glazing	81 %	56 %	0.76	0.50

The above table shows clear dual glazing offers a better total window U-value than clear insulating glass while all other values are the same. When closed blinds are added to the window, dual glazing with between-the-glass blinds offers an 18% improvement in total window U-value and a 43% improvement in solar heat gain coefficient (SHGC) over a window with room-side blinds.

In addition to using layers of glazing and controlling the properties of the spaces between them, the Web site www.efficientwindows.org suggests improving the energy performance of glazing products by changing the chemical composition or physical characteristics of the glazing material by adding a tint or by applying a low-emittance (Low-E) coating to the glazing material surface to reduce heat gain and glare.

Framing Materials

The next consideration is window frame material. The window frame must do several things. It should provide strength to withstand wind and other loads, drainage for water and accommodate weather

stripping, glazing channels and rabbets, weep holes, internal gutters, screw bosses, concealed fasteners, flashings, drips, corner keys, thermal breaks, hardware, and frame accessories.

Properties of the framing material affect the thickness and weight of each window. A suitable material can be chosen from four available options: wood, aluminum, vinyl and fiberglass. Each one has properties that make it more appropriate for certain applications.

Wood is one of the oldest building materials and has been the traditional frame material in all types of buildings primarily because it has been consistently and readily available and can be milled into many shapes to fit simple or complex designs. Wood-framed windows also can have an exterior cladding of vinyl or aluminum to increase weather-resistance while retaining an attractive wood finish on the interior.

Aluminum is a popular window frame material appreciated for its light weight and durability, but it has the disadvantage of high thermal conductance. This nonferrous metal is made from bauxite and cryolite and can be extruded into simple or complex frames. It is available in a variety of anodized and painted finishes. Aluminum is considered mostly for commercial and institutional use and when manufactured with a high percentage of recycled content adds value in green building.

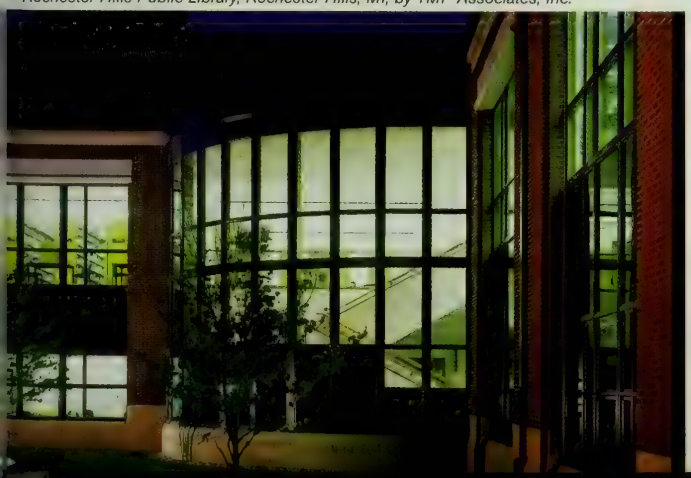
Vinyl (also known as polyvinyl chloride or PVC) is newer than wood or aluminum as a window frame material and is derived from fossil fuels. It offers good insulating values and has good moisture resistance. Some recent advances have improved dimensional stability and resistance to degradation from sunlight and temperature extremes. Vinyl is considered a residential material and because PVC formulations for windows are not consistent throughout the industry, quality and performance can vary.

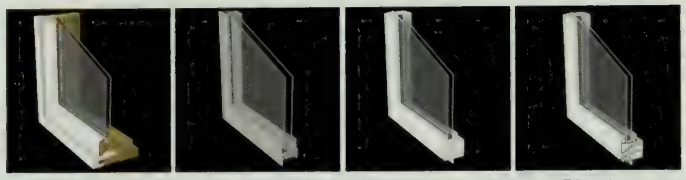
As window framing material, fiberglass (glass-fiber-reinforced polyester) is an emerging product. Fiberglass framing products were developed in the 1990s and currently are used in less than 2% of today's market. Fiberglass is a composite that can be pultruded into lineal forms. Because the material is stronger than vinyl, it can have smaller cross-sectional shapes and thus less area. It provides exceptional thermal stability, strength, and durability.

The Selection Process

Four window types are commonly used in commercial structures: double-hung, casement, fixed and awning. A double-hung window consists of two sashes operating in a rectangular frame with upper and lower halves able to slide up and down. A casement window swings open on side hinges. A fixed window has no operating sashes, and an awning window is similar to casement, but the sash is hinged at the top and always swings out.

Aluminum-clad wood windows offer high thermal performance and unified appearance at Rochester Hills Public Library, Rochester Hills, MI, by TMP Associates, Inc.





Aluminum-clad wood | *Aluminum with thermal break* | *Vinyl* | *Fiberglass*

Source: www.efficientwindows.org

How Window Materials Meet Selection Criteria

	Wood	Aluminum	Vinyl	Fiberglass
Aesthetics	Warm, natural beauty; many finish options	Many finish options	Limited color options	Many color options
Energy Efficiency	Natural insulator	Natural conductor	Good insulator	Good insulator
Environmental Impact	Very low embodied energy; can be recycled	High embodied energy; can be recycled	Medium embodied energy; not recyclable	Low embodied energy; limited recyclability
Price	Medium to high first cost; low long-term cost	Medium to high first cost; low long-term cost	Low first cost; higher long-term cost	Low first cost; low long-term cost
Durability	High	High; but potential for thermal break failure	Low; cracks easily	High
Maintenance	Interior wood surfaces may need refinishing; scratches can be repaired	Low; not scratch resistant	Low; may require early window replacement	Low; high scratch and dent resistance

Aesthetics

The choice of materials is influenced by the architect's perspective and the project design intent. Several things must be considered: scale and proportion, sightlines, relationship to other interior finishes, frame profiles, and glass types. Hardware and location of window treatments (room side or between-glass blinds) also influence the choice of frame material.

Of the four framing materials, wood is unique because it allows different finishes for the interior and exterior and provides a warmth and natural beauty not offered by the other materials.

Aluminum offers a broad selection of anodized and painted finishes that typically are the same on both sides. Aluminum can be combined with wood in an aluminum clad wood frame that offers the warmth and natural beauty of wood on the interior and the durability of aluminum on the exterior.

Vinyl framing offers few color choices and has the same finish on both sides. Medium to dark colors are especially limited. Some manufacturers offer surface treatments such as laminates or other coating options to increase color selection and surface appearance.

Fiberglass has high design flexibility with many color options. The material is typically painted the same color on both sides but offers the potential for different colors on the exterior and interior.

Energy Efficiency

The energy efficiency of the windows has a significant impact on the overall annual operating costs of a building. To obtain the best energy efficiency from a window three factors must be evaluated: thermal performance, condensation resistance and occupant comfort. Additionally, because installation can affect window



Wood windows optimize design performance and budget flexibility at the F.M. Kirby Shakespeare Theatre, Drew University, Madison, NJ, by Ford Farewell Mills and Gatsch, Architects

performance, the manufacturer's installation instructions should be evaluated and followed for optimum performance.

To compare thermal performance look at the R-values and U-values. The R-value measures resistance of glazing material or fenestration assembly to heat flow. Materials with higher R-values have higher resistance to heat flow and are better insulators. The U-value measures the rate of non-solar heat loss or gain through a material and may be expressed for the glass alone or the entire window including frame and spacer material. The lower the U-factor, the greater a window's resistance to heat flow and the better its insulating value.

Choice of materials has a bearing on both these factors. For example, in Chapter 30 of the 2001 *ASHRAE Fundamentals Handbook*, the addition of a thermal break in an aluminum frame improves the U-value from 1.92 to 1.13. An aluminum-clad wood frame further improves the frame U-value from 1.13 to 0.51.

The handbook also indicates that total Unit U-values for the entire window include both the frame and glass. The range for aluminum windows with thermal breaks is from 0.35 (triple glazing with low-E coatings) to 0.64 (double glazing with clear glass). For aluminum-clad wood windows the range is from 0.25 (triple glazing with low-E coatings) to 0.53 (double glazing with clear glass). The glass is the same so the difference in U-values is a result of changing frame material.

The National Fenestration Rating Council (NFRC) is a reliable source for determining window energy properties and comparing products. NFRC rates window units for U-factor, SHGC, visible light transmittance (VT), and air leakage (AL).

Another factor that affects window thermal performance is air infiltration. Air leakage heat loss and gain occur by infiltration through cracks in the window assembly. This is indicated by an AL rating expressed as the equivalent cubic feet of air passing through a square foot of window area. The lower the AL, the less air will pass through cracks in the window assembly. Select windows with an AL rating of 0.30 cfm/sq ft or less.

Resistance to condensation also is important. Condensation on window frames can damage interior windowsills, finishes and eventually walls and floors. Specifying products and design conditions that regulate surface temperatures and moisture in the air will minimize potential for condensation.

Materials with greater resistance to condensation also provide greater comfort to occupants seated near windows, and occupant comfort has a direct impact on worker productivity.

Wood is considered the best performer from a thermal point of view. It is a natural insulator with excellent resistance to condensation and a high degree of thermal comfort.

Aluminum is a natural conductor and therefore has poor energy efficiency and low resistance to condensation. Aluminum's R-value is minimal and raises the overall U-factor of a window unit. In cold climates, an aluminum frame can become cold enough to condense moisture or frost on the inside surfaces.

A desirable combination for thermal performance and comfort is an aluminum-clad wood window. This alleviates differences in exterior and interior frame temperatures, offering resistance to condensation, greater thermal comfort and lower annual energy costs than thermally-broken aluminum windows.

The average annual savings from the use of aluminum-clad wood windows is fairly consistent across the United States: 27% to 31% compared to single-glazed aluminum windows without thermal breaks; 6% to 9% compared to thermally-broken aluminum windows.

Vinyl has the same thermal efficiency as wood and in terms of thermal performance vinyl frames are comparable with wood. However, vinyl's expansion and contraction encourages air and water infiltration which increases maintenance and damage issues.

Fiberglass offers thermal efficiency similar to wood and the lowest expansion and contraction rates of all four materials. Less expansion ensures a consistent bond between sash and glass and reduced energy costs as well as less stress on joints for greater durability.

Environmental Impact of Materials

The choice of windows can add value to a structure and the environment. The most commonly used evaluator of a structure's environmental impact is the U.S. Green Building Council's LEED® (Leadership in Energy and Environmental Design) Green Building Rating System. This guide for designing, constructing, operating, and certifying buildings is based on accepted energy and environmental principles.

LEED's measurement standard follows a point system. The four levels of LEED certification and required points for each are:

Certified	26 - 32 points
Silver	33 - 38 points
Gold	39 - 51 points
Platinum	52+ points (69 possible)

The points are earned within six categories. The five environmental categories (not including Innovation and Design Process) are divided into credits. One or more points are available within each credit, and points are achieved by meeting specified requirements.

- Sustainable Sites: 8 credits, 14 points
- Water Efficiency: 3 credits, 5 points
- Energy and Atmosphere: 6 credits, 17 points
- Materials and Resources: 7 credits, 13 points
- Indoor Environmental Quality: 8 credits, 15 points
- Innovation: 4 points

CLICK FOR ADDITIONAL REQUIRED READING
The article continues online at:
archrecord.construction.com/resources/conteduc/archives/0505pella-1.asp
To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, call Pella at 1-800-84-PELLA.
The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series

LEARNING OBJECTIVES

- *Understand window selection criteria and its impact on your projects and clients;*
- *Identify primary advantages and disadvantages of different window framing materials in commercial buildings;*
- *List and compare the advantages and disadvantages of sealed insulating glass and dual glazed systems; and*
- *Establish a method to determine the most appropriate window system for future projects.*

QUESTIONS

1. Which of the following has the greatest affect on energy efficiency and building operating costs?
 a. Window size
 b. Glass selection
 c. Frame material
 d. Window covering
2. The most commonly chosen systems for commercial structures are sealed insulating glass and dual glazed systems. The difference in first cost between these systems is minimal.
 a. True
 b. False
3. In most cases, which glazing system offers a life cycle cost advantage?
 a. Dual glazing
 b. Sealed insulating glass
4. Of the four window frame materials, which one has the highest thermal conductance and embodied energy?
 a. Wood
 b. Aluminum
 c. Vinyl
 d. Fiberglass
5. Which of the four window frame materials has the lowest thermal conductance and embodied energy?
 a. Wood
 b. Aluminum
 c. Vinyl
 d. Fiberglass

INSTRUCTIONS

Refer to the learning objectives. Complete the questions below. Go to the self-report form on page 381. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Record's* website—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

6. What measures can be taken to maximize the energy performance of windows?
 a. using layers of glazing
 b. specifying between-the-glass blinds in lieu of room-side blinds
 c. applying a low-E coating to the glazing material surface
 d. using wood or fiberglass frames
 e. all of the above
7. What framing system is rated as having the least environmental impact?
 a. Wood
 b. Aluminum
 c. Aluminum clad-wood
 d. Vinyl
 e. Fiberglass
8. Material with higher R-values has less resistance to heat flow and is a better insulator.
 a. True
 b. False
9. If the glass remains the same, a change in the frame material can improve the U-value for the entire window?
 a. True
 b. False
10. In which of the LEED environmental categories can windows not earn points?
 a. Sustainable Sites: 8 credits, 14 points
 b. Water Efficiency: 3 credits, 5 points
 c. Energy and Atmosphere: 6 credits, 17 points
 d. Materials and Resources: 7 credits, 13 points
 e. Indoor Environmental Quality: 8 credits, 15 points

About Pella

Pella Corporation is a world leader in the manufacturing of premium windows and doors. Long-recognized in the window industry for its technology and innovation, the company holds more than 100 U.S. product and design patents.

Registered with the American Institute of Architects as a Continuing Education System provider since 1995, Pella is committed to developing quality learning activities in accordance with AIA/CES and Health/Safety/Welfare (HSW) criteria. Pella offers several continuing education programs through www.pellacommercial.com in addition to this partnership with *Architectural Record*.

Pella also awards scholarships to top students at leading universities and schools of architecture. Please contact your local Pella architectural consultant for more information about these programs.

VIEWED TO BE THE BEST.® Pella
800-84-PELLA
www.PellaCommercial.com

CIRCLE 367 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

McGraw-Hill CONSTRUCTION Sweets
Product Marketplace



The largest, most up-to-date collection of architectural catalogs online

Spend less time searching and more time designing at sweets.construction.com

Now every catalog in Sweets Catalog Files is online at Sweets Product Marketplace, the most authoritative industry product information source for nearly a century.

- **Explore:** 61,000+ of the most updated products, all in one Product Marketplace, all classified by CSI MasterFormat™ '04
- **Download, copy, paste:** 1,800 PDF format architectural catalogs, 4,000 3-part specs, and 15,000 CAD details instantly

Register now at sweets.construction.com to become a member and enter to win an Apple iPOD mini.

For more information about putting your catalog in the Sweets Product Marketplace, call 1-800-394-4309.

connecting people_projects_products

McGraw-Hill CONSTRUCTION

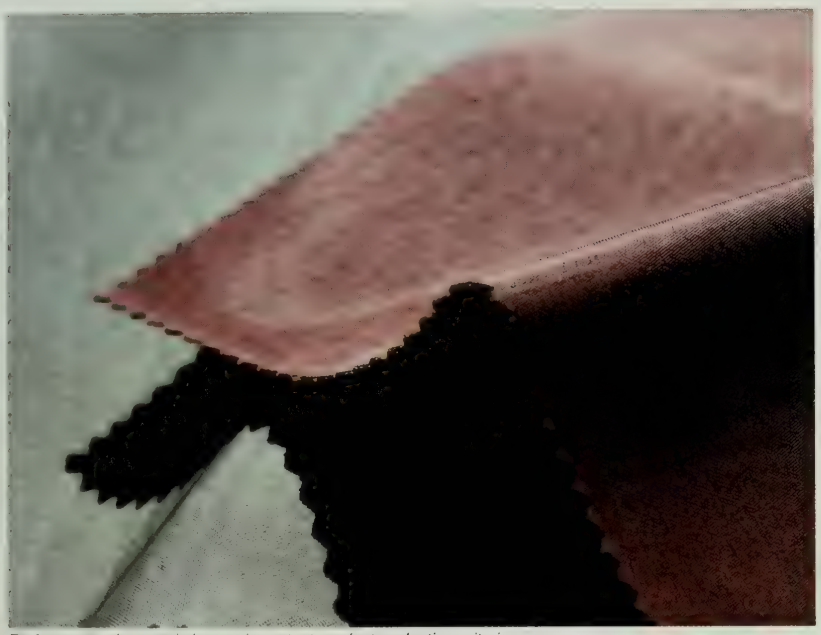
Find us online at www.construction.com

SPMAR205

The McGraw-Hill Companies

SWEETS
PRESENTS

The Art of Product Research and Selection



Performance characteristics are important product evaluation criteria. (Photo: RTKL)

Design is not making beauty, beauty emerges from selection, affinities, integration, love.

Louis I. Kahn, FAIA, (1901-1974), 1971 AIA Gold Medalist

You've got to bumble forward into the unknown.

Frank Gehry, FAIA, 1999 AIA Gold Medalist

By Barbara A. Nadel, FAIA

In recent years, cultural trends, technology, innovation and discovery have inspired the creation of hundreds of new materials and products, which, when combined, provide design solutions for problems that didn't exist a generation ago. The vast array of new and existing building products and emerging technologies reflects the dilemma facing design professionals who must research and choose elements integral to project aesthetics, functions and budgets.

Two 21st century concerns, sustainability and security, are increasingly important design criteria for owners. Sustainability has heightened awareness among design professionals, manufacturers, clients, and the building industry about the opportunities for exciting new products and materials to meet Leadership in Environmental and Energy Design (LEED) standards. From tax credits, to enlightened owners seeking to be environmentally responsible, sustainable products and best practices are more prevalent in all building types. Similarly, in the post 9/11 era, the standard of care is still evolving for security design. New and existing buildings must be able to address the lessons learned from 9/11, through security-driven life safety codes, industry standards, and durable, new products designed to withstand blasts and natural forces, especially in civic buildings, and other high risk targets.

Keeping current on these developments, and many others, is essential for design professionals at every level of experience and job title. New products, materials and ideas emerge constantly, while older, or less successful models are discontinued with little fanfare. The task for design professionals is to identify what they need, sift through what's out there, study past and anticipated performance, and learn to evaluate what they are looking at to ensure that the products selected and specified are appropriate for each project application.

Specification writers work with manufacturers constantly, and their job ensures that they remain on top of the industry. But for seasoned design professionals with years of experience, as project managers, designers, and technical coordinators, many of the materials and methods they learned about in school have often been superseded by new, emerging technologies and products, making their job even more challenging. Younger professionals are comfortable surfing the Internet for product information, but to be most effective in their searches, they must be open to embracing a variety of print resources, multimedia and professional activities. That is perhaps the most important message for educators to convey to students, since today's hot new material may be obsolete in four years.

Barbara A. Nadel, FAIA is principal of Barbara Nadel Architect, in New York City, and writes frequently about design and technology.

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **The Art of Product Research and Selection.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 303, then follow the reporting instructions on page 382 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Explore methods and best practices on the art of product research and selection.*
- *Analyze product evaluation criteria used by established architectural firms and seasoned design professionals when specifying products.*
- *Understand information typically required for approval of product substitutions on projects*
- *Review the types of product information generally required during various project phases.*

Clients and owners are increasingly design and budget conscious, especially in an era of limited resources among many public and private sector organizations. Large organizations with ongoing capital programs may have a palette of preferred products and vendors, making the search process easier and faster. Savvy facility managers and in-house design professionals may take a pro-active, hands-on approach to product evaluation and selection ("here are the brands we find acceptable") or they may be open to new ideas ("let's see what you find to be aesthetic and reliable"). Government agencies generally require three specified products (or ask for equals), potentially tripling the amount of research needed for every major item.

Design consultants should remain aware of the degree of involvement clients wish to maintain during product research and selection, to ensure that project needs are met. Client involvement may vary when dealing with highly visible design elements, such as building envelope and window systems, to the hidden, more functional components that keep their facilities operational, such as insulation systems.

Everyone loves to investigate new and exciting marketplace innovations, but few brave souls want to be the first to use them in projects, due to the lack of historical performance data and the inherent risk of potential liability for owners and design professionals.

Collectively, all of these factors converge to make the art of product research more sophisticated than ever before, and more critical to overall project success. This article will explore best practices on the art of product research and selection by examining how design professionals go about finding information. Various methods will be discussed, along with product evaluation techniques, and networking opportunities used by large, medium and small firms. For brevity, the term "product" will apply to building industry materials, coatings, furnishings, finishes and equipment, unless noted.

Process Not Product

Many architects learn about addressing "process, not product" during their design training. Essentially, the methodology of seeking information and problem solving is the most important part of the journey leading to a design solution. Asking good questions, exploring alternatives and developing options are vital steps. Large organizations with strong purchasing power may have the ear of the industry and get involved with product development, while small to mid-sized firms may work harder on finding design information to in order to maintain their edge.



Lighting in SOM's material library is color corrected and can be manipulated to simulate proposed project lighting. The library is located to allow natural light, fluorescent and incandescent lighting into the space, so any combination is possible. (Photo: Skidmore, Owings and Merrill)

PRODUCT INFORMATION RESOURCES	PEOPLE RESOURCES FOR PRODUCT INFORMATION
Catalogues, especially comprehensive multi-volume industry references	Architects
CD-ROM disks from manufacturers	Building owners and landlords
Focus groups	Clients
Internet – manufacturer websites and emails	Colleagues
Mailings	Consultants
Manufacturer brochures	Contractors, construction managers
Networking	Engineers
Office library	Facility managers
Professional organizations	Government agency personnel
Publications: books, magazines, newspapers, newsletters	Interior designers
Seminars	Landscape architects
Showrooms	Manufacturers
Site visits	Sales representatives
Trade shows and conventions	Specifications writers
Travel	Suppliers

How Large Organizations Approach the Discovery Process

Large firms, public agencies, and in-house facility managers with high dollar volumes of work often approach product research and selection differently than small to mid sized organizations. Firms specializing in project types, such as education, historic preservation, or office interiors, for example, may have longstanding relationships with industry representatives. With greater purchasing power and opportunities, many major manufacturers routinely seek out large organizations to show them new products and developments in the pipeline. Sometimes they will invite designers to participate in focus groups. These trusted relationships provide design professionals with more choices to share with clients, and allow them to work directly with manufacturers to customize and develop new products for specific needs. Large organizations often devote significant resources and personnel to product research.

Herbert Lynn, AIA, Associate Partner, and Director of Research and Specifications for Skidmore, Owings and Merrill, New York City, works on every project in the office. During conceptual phases, designers go to the staffed materials and catalogue libraries, containing samples from every manufacturer in the world, to see what may be useful. Binders contain samples, agency approvals, New York City-approved testing methods, and where a material is installed in New York City. The materials library lighting is color corrected and located to allow natural light, fluorescent and incandescent lighting into the space, to simulate proposed conditions.

The New York-based SOM Lab, a firmwide clearinghouse for design concepts, researches product performance, and new, innovative materials and systems from around the world. If a question arises regarding titanium, for example, the Lab accumulates information and sends inquiries to SOM offices on the internal intranet, while searching for related materials.

Searches include contacting architects, manufacturers and fabricators in Europe, if need be, to find information. Topics evolve based on project need, such as curtain wall, point supported glass, metal and green roofs. Information is reviewed by the firm's Technical

Group, which establishes product evaluation criteria, such as codes, liability, durability, past product history and location. Findings are posted on the office intranet for internal distribution.

"We balance innovative research against potential liability risks. We review constructability and budgets, and will speak with engineers, and research and development groups, not just local sales representatives. Hard copy data, printed catalogues, PDF files, and CAD details are very useful," says Lynn.

Once products are selected, meetings are held with manufacturers and fabricators. During the project concept phase, sample palettes are developed, and codes reviewed. For example, using glass calls for preliminary energy calculations, percentage of allowable glass, and products applied to previous projects. Documentation lists products used for each project, citing finishes, manufacturer, and location, and is available to team members. During the construction documents phase, the project team knows what is being used and where. An in-house committee organizes over 60 luncheon seminars annually, with product sales representatives.



A well-stocked material library, with catalogues and samples, is an essential tool during early project design phases.
(Photo: Skidmore, Owings and Merrill)

Substitution Requirements

Occasionally, product substitutions must be made due to cost, availability, or contractor request. Understanding that product substitutions can have a dramatic effect on a building project, SOM maintains rigid criteria for considering substitutions, to ensure that steps are taken to verify that a proposed substitution is valid. Each substitution request is internally reviewed by SOM, and requires extensive documentation by the contractor or subcontractor. Minimum standards apply, and additional information may be required for submission, depending on the type of product or system evaluated. The contractor or subcontractor must submit the following to substantiate the substitution:

1. Product data, including drawings, fabrication, and installation procedures.
2. Samples, where samples of the specified products are requested.
3. A detailed comparison of significant qualities of the proposed substitution with those of the material or work specified. Significant qualities may include elements such as size, weight, durability, performance, visual effect, code compliance, maintenance requirements, energy usage, and environmental considerations.
4. Coordination information, including a list of changes or modifications made necessary to other parts of the work, including the work of other trades that will become necessary to accommodate the proposed substitution.
5. A statement indicating the substitution's effect on the contractor's construction schedule, indicating the effect of the proposed substitution on overall contract time.
6. A cost comparison between the product specified and the requested substitution, including a proposal of the net change, if any, in the contract sum.

Liability

Product liability is always on the minds of design professionals throughout a project. The standard of care within the profession is a benchmark used to determine what other architects are doing. Related factors include how long a product has been in the marketplace, how well it performs, and any problems that have occurred elsewhere. New products, materials and systems may not have any history, leaving the due diligence and research to the architect.

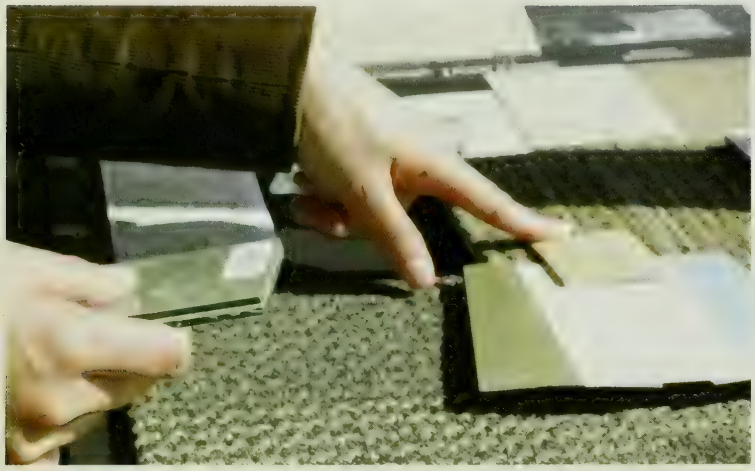
Innovation

SOM's Director of Strategic Innovation works with several major manufacturers to develop new products for use in projects and in the marketplace, including carpet and ceiling tiles, insulation and wall panels. In these cases, the firm identified a need, and worked with manufacturers to create new products.

Interiors

"Web searching is only one component of the discovery process. We supplement our print library with manufacturers' websites for updates, CAD details and photos, for drawings and presentations," says Dale A. Greenwald, Interior Design Director, Cannon Design, New York City. Other techniques include focus groups, publications, and trade shows, which provide exposure to a lot of information in a short amount of time, along with a chance to make comparisons. Monthly staff meetings cover discussion about new or interesting products. The staff compiles a database of favorite products, sorted by category. Greenwald's interiors group typically investigates solid surfaces, wood, stone, laminates, flooring, coatings, lighting, and textiles. Evaluation criteria are applied for each product, as follows:

1. Performance characteristics
2. Testing methodologies and results
3. Installations (local and largest)
4. Warranties
5. References (client, installer, contractor)
6. Sustainability
7. Availability – lead times, install times
8. Installer Recognition – familiarity or training
9. Cost (comparatively to other similar products or materials)
10. Advantages and Disadvantages



Color selection generally occurs after products and materials have been evaluated and chosen. (Photo: RTKL)

Designer Robert Berry, AIA, LEED AP, Principal, RTKL, Baltimore, Maryland weighs novelty versus performance when searching for new materials and products. For a Baltimore office building lobby, Berry was searching for something different to address a design issue. He stumbled upon a sample in the firm's interiors library and wanted more information. The paint finish on the metal sample was a technique developed locally, without a history of other applications. He visited the local shop, where the owner was reluctant to share details of his proprietary process. Berry and his specifications writer carefully evaluated the technique, and reviewed many samples before specifying the process.

An advantage for many large firms, especially those specializing in a few building types, is the established relationships they have with many companies and suppliers, which reduces the need for constant product research. "These companies are always in the office, doing luncheon seminars, sharing what's in the pipeline, so we know where the market is going. Using search engines at the outset has become second nature, but construction industry search engines and paper catalogues provide a full collection of information, in addition to a substantial office material and product library. Bookmarking favorite sites saves time. We use PDFs constantly, especially photos of materials, because they are easy to print, file, add to the project binder, and use in presentations. We document what we use, and where, for future reference," Berry says.

RTKL does a lot of international work, which means more due diligence when checking out local fabricators, products and company histories to determine what is cost effective and best for the client. Typically, the firm works with a local architect during design development, and both firms select materials to achieve a desired look. In one instance, Berry specified granite for an office building in Poland, and wanted to work with local suppliers and distributors. He sent U.S. samples to the client and local architect, and flew to Poland to find a close match that would meet performance criteria, quality and aesthetics. "We set the direction of the material palette early on, and remained open minded. The choices may be different abroad, but as long as everyone understood cost and value, we were usually able to match materials without a problem," says Berry.

Materials Resource

"We have our antennae up for new products and manufacturers all the time. If we see something we like, we track it down, online and through other research. New products with blast coverage in magazine ads get our attention," says Margaret Helfand, FAIA, principal of Helfand Architecture PC, in New York City. Her 10-person design-oriented practice relies on remaining aware of and finding fresh concepts and materials. Helfand's office belongs to a subscription-only New York City-based materials resource library and website that enables designers to review unusual new products at their convenience. The showroom serves as an industry connection among designers and manufacturers who want to reach small and medium sized firms. Members make an appointment, and can review samples, technical information, and product profiles. Large firms with high volume work generally maintain an extensive in-house materials library and don't have a need for an outside service.

Helfand has found several sustainable products at the showroom, such as a "bio-based" composite material created from sunflower seed hulls, an abundant agricultural fiber. The material exhibits the natural qualities of traditional burled woods, making it an environmental and economical alternative to hardwood. She used this material as a bumper guard in a college project. "One of our evaluation criteria was the ability to withstand high impact. The material is homogeneous, like birds-eye maple on steroids. When it chips, more of the same material is exposed, and it is able to sustain impact," says Helfand.

"The product library is our 'high altar,' a focal point for the office. We approach each project as an art form, inventing new design elements and features, by customizing standard systems and products. Samples are sorted in bins by Construction Specifications Institute (CSI) category. We have samples in active use, those from past projects, and those we love and want to use. When researching materials, we might find something we like and will find a way to use in future projects. When new samples arrive, we look at them, and add them to our computer database, to track contact information and manufacturers. During early project phases, from concept design, feasibility studies and schematics, we consider major materials. Budgets, materials and outline specifications begin immediately. Early on, we identify appropriate materials that are visually exciting and durable. If we need resilient flooring or special glass, for example, we go through the samples and see the manufacturer names," she adds.

For an urban school expansion project, where blending a historic building with the street was important, Helfand wanted a lead coated copper wall material with a granite base. A sheet metal book, calls to vendors, finding details online, and intensive investigation by various search methods enabled the project team to locate the needed information. During the construction documents phase, the team continues to work with manufacturers and vendors for obtaining technical data.

Building product sales representatives are an important link between manufacturers and design professionals. The firm librarian charged with maintaining catalogues and sample libraries can research with manufacturers, saving time for designers. This process can greatly influence determining whether products meet project criteria, leading to specification.

An eclectic approach to finding products on the Internet invariably leads to various sources, says project manager John Tinmouth, of Helfand Architecture. He often begins with a general or building industry search engine to find more established products, and supplements his search with architectural trade magazines and design-oriented websites. Tinmouth, like others in his office, enjoys showroom visits to see products that are not generally commercially available. At least one consultant he knows in New York works with sales representatives from different manufacturers to collect new products and share them with design firms seeking fresh, unique approaches. ■

CLICK FOR ADDITIONAL REQUIRED READING
The article continues online at:
archrecord.construction.com/resources/conteduc/archives/0505sweets-1.asp
To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, call Sweets at 1-800-394-4309.
The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series

LEARNING OBJECTIVES

- *Explore methods and best practices on the art of product research and selection.*
- *Analyze product evaluation criteria used by established architectural firms and seasoned design professionals when specifying products.*
- *Understand information typically required for approval of product substitutions on projects*
- *Review the types of product information generally required during various project phases.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions above. Go to the self-report form on page 382. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Record's* website—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. All of the following are effective resources for design professionals to obtain product information except which?
 - **a.** Print catalogues
 - **b.** Manufacturer websites
 - **c.** Construction industry search engines
 - **d.** Billboards
 - **e.** Seminars
2. According to design professionals, all but which of the following are advantages of using electronic files in PDF format for product research?
 - **a.** Ease of access from the Internet
 - **b.** Useful for developing client presentations
 - **c.** Appropriate for sharing product information within the office and project team
 - **d.** Contain technical information, such as sizes, strength, flame ratings
 - **e.** Provide videos of product performance
3. Key factors influencing whether or not a design professional will specify a new product or manufacturer on the market are:
 - **a.** Extensive availability of colors and finishes
 - **b.** Risk of potential liability
 - **c.** Ease of installation
 - **d.** Extent of available historical performance data
 - **e.** All of the above
4. During the schematic design and design development phases, typical product information required by design professionals includes all but which?
 - **a.** Construction details
 - **b.** Availability
 - **c.** Shop drawings
 - **d.** Sustainability applications
 - **e.** Performance criteria
5. When a contractor requests a product substitution, what information is generally not required for the architect's review, in order to approve the substitution?
 - **a.** Fabrication drawings
 - **b.** Installation procedures
 - **c.** Magazine advertisements showing the proposed product
 - **d.** Detailed comparison of the cost and qualities of the proposed substitution and the item specified.
 - **e.** Samples of the proposed product
6. Product research techniques often vary between large firms, and small to mid-sized firms. Reasons include:
 - **a.** Major manufacturers seek out large firms to keep them apprised of new developments
 - **b.** Large firms generally have more extensive in-house materials libraries
 - **c.** Smaller firms are more likely to use outside services to assist in finding new products
 - **d.** All of the above.
7. Product selection evaluation criteria during early design stages of a project generally includes all but which of the following:
 - **a.** Color selection
 - **b.** Durability
 - **c.** Performance history
 - **d.** Sustainability
 - **e.** Advantages and disadvantages
8. All of the following kinds of lighting in materials and samples libraries are appropriate to simulate typical lighting conditions within various building types except which?
 - **a.** Natural daylight
 - **b.** High pressure sodium
 - **c.** Fluorescent
 - **d.** Incandescent
9. Searching the Internet for product information has advantages and disadvantages. Some disadvantages from web searches include:
 - **a.** Many irrelevant websites come up
 - **b.** False paths when looking for a certain product type
 - **c.** Colors on the computer screen are not an exact match to samples
 - **d.** Up to 80 to 90 percent of time spent searching the Internet is unproductive
 - **e.** All of the above.
10. Facility managers at large government agencies and organizations are most concerned about which of the following product evaluation criteria:
 - **a.** Manufacturer's track record on repair, replacement, troubleshooting and service calls
 - **b.** How often a product is used in a 24-hour cycle
 - **c.** Life cycle costing
 - **d.** Rigorous performance criteria and field testing
 - **e.** All of the above.

About Sweets

Sweets Product Marketplace provides the largest, most up-to-date collection of architectural catalogs, CAD details, and 3-part specifications. Visit us online at www.sweets.construction.com.

McGraw-Hill CONSTRUCTION Sweets
Product Marketplace


IMAGINE THE RITE DOOR®
The real beauty of this versatile door system is in your imagination.
We could tell you about all the advantages of The RITE Door for your commercial openings. Like how it has pre-installed hardware for trouble-free installation and performance, and how it fits perfectly with virtually any application—from hospitals and hotels to retail office spaces and schools. And, how it can also blend completely into the architecture or make its own design statement with its wide range of colors, textures and finishes. But, what really matters is all the ways you can imagine it.
So go ahead, use your imagination.
Visit www.adamsrite.com/theritedoor4 to see more. Or, call: 1.800.87.ADAMS or Email sales@adamsrite.com for further details.
Architect: Nadel Architects, Inc. Installers: Don La Force Associates, Inc.
ADAMS RITE
MANUFACTURING CO.
CIRCLE 130 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS

BELDEN

THE BELDEN BRICK COMPANY

Canton, Ohio / (330) 456-0031

www.beldenbrick.com

An ISO 9001:2000 Registered Quality Management System





Colors

Belden Brick is available in a world of colors including soft whites and creams, golden buffs and dusty tans, delicate pinks and cinnamon reds, chocolate browns, pewter grays and coal blacks. With so many colors to choose from, your options are truly endless. Here is a small sample of over 200 color ranges, 13 textures and 16 different sizes.

Landmarks in Brick

Sizes & Shapes

More sizes mean lower wall costs. With as many as sixteen different sizes to choose from Belden has the size you need. Plus, Belden has made thousands of special shapes to provide special details for individual projects. Need an "impossible" shape for your project? Then call Belden Brick and learn how the impossible can become reality.



Textures

Belden Brick offers thirteen different textures that range from silky smooth finishes to rugged randomly textured styles. Each texture can make its own distinctive contribution to the visual impact you seek.







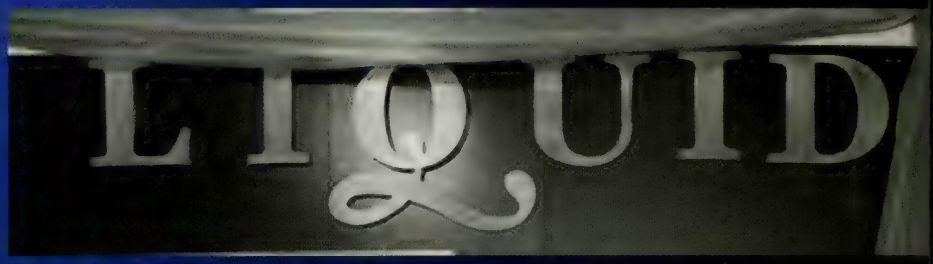


CIRCLE 131 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CHMI

A Proud USA Factory

North America's Finest Quality Products
CUSTOM HARDWARE MANUFACTURING, INC.
800.262.2464 sales@chmi.com www.chmi.com



New & Cost Effective Custom Designacast Signage



New Bath & Shower
Enclosures & Hardware



Standard Shapes & New
Custom "Designacast"
Personalized Handles



New & Innovative (Rolls In Glass)
Smooth Sliding Shower Systems



New Smart Touch Electronic
Handle System Applications

See us at
AIA Booth #871



New Designer Spider Fittings
Canopy & Interior Fittings



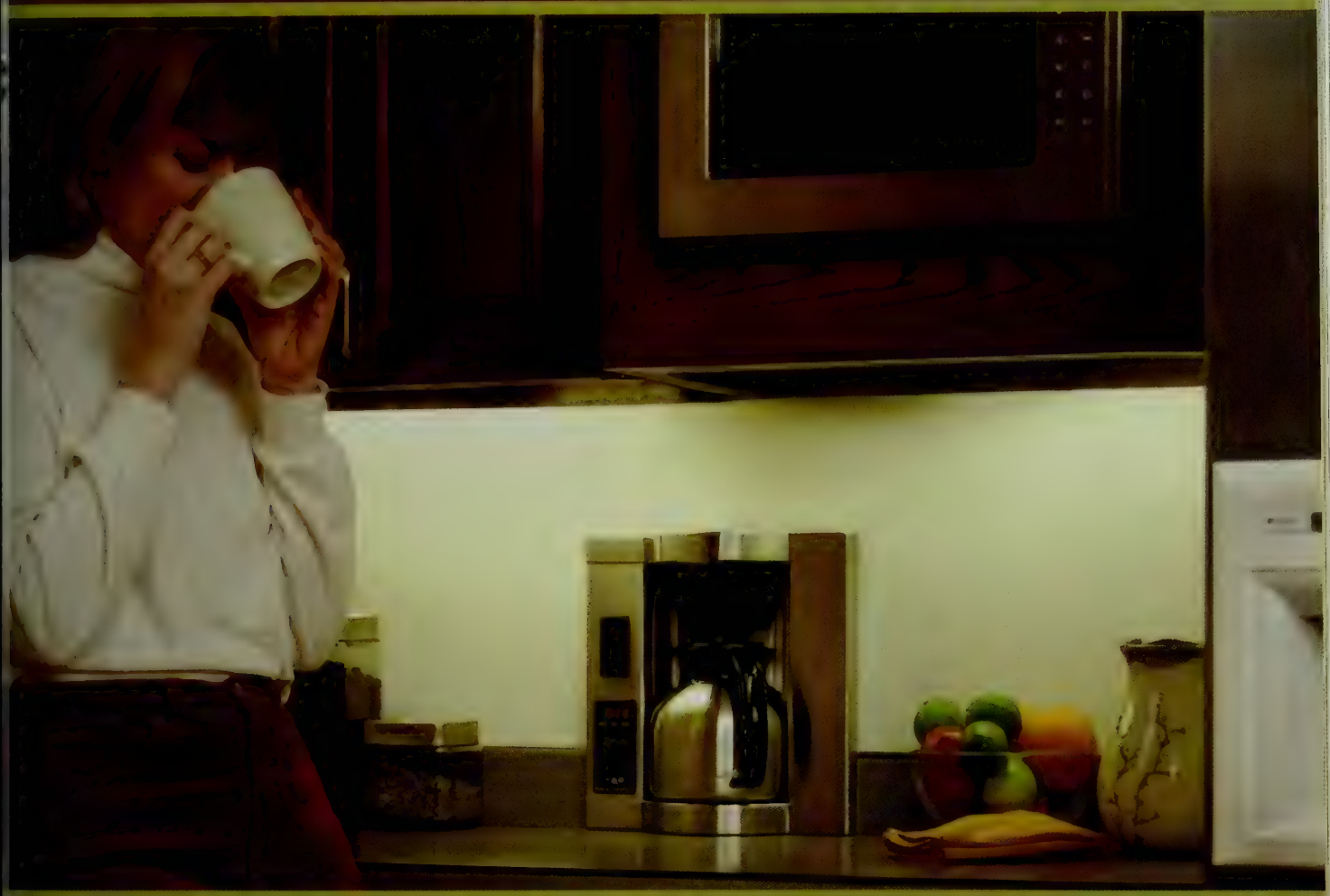
New Styles in
Sliding Office Systems

Design *Innovation* *Quality*

CIRCLE 132 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

BREW EXPRESS™

Fits in your wall *Fits in your life*



MEET THE WORLD'S FIRST TRULY BUILT-IN-THE-WALL, SELF-FILLING COFFEE SYSTEM.

The revolutionary new design of the Brew Express blends style, performance and convenience into an easy-to-use appliance that makes brewing coffee and hot beverages a pleasure instead of a burden. The Brew Express installs into the wall and hooks directly to your water supply, so it also fits right into your life. You'll gain counter space and enjoy perfectly brewed coffee, all without spilling a drop of water.

STATE DISTRIBUTORS 253-872-2900
RCELL-MURRAY 806-892-4040
ED APPLIANCE DISTRIBUTORS 800-613-7333

OAKTON DISTRIBUTORS, INC. 800-262-5866
DOOLITTLE DISTRIBUTING 913-888-7820
STOVER SALES 704-597-1700
FAXON DISTRIBUTING 860-290-8427

CARL SCHAEDEL & CO. 973-244-1311
UNITED PRODUCTS DISTRIBUTORS 410-866-6800
ARD DISTRIBUTORS, INC. 800-654-7721

LANCE LARKIN

BREWEXPRESS.COM (866) 268-5953

CIRCLE 133 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/


TEKA
ILLUMINATION
Enduring Materials
Advanced Technology
Classic Design
86 Gibson Road #3
Templeton, CA 93465
T (805) 434-3511
F (805) 434-3512
info@teka-illumination
www.teka-illumination.com
Circle No. 148

Lighting

Architectural illumination allows the interior landscapes of three hospitality projects to blossom

BRIEFS

Sponsored by the American Society of Interior Designers, InformeDesign has released a new issue of the monthly newsletter *Implications* that **delves into daylighting**. Each issue of the publication explores one major subject in relation to design and human behavior. This edition, authored by Michael Kroelinger, AIA, professor and director of the School of Architecture at the University of Nevada, Las Vegas, **recommends strategies to designers and architects** for the use of daylighting and electric lighting in interior spaces to "improve the human experience" and energy efficiency. The newsletter also provides guidelines for using daylighting in varying climates, and lists related books and other studies. Go to www.informedesign.umn.edu.

CONTENTS

310 Creative Uses

315 Duvet
Andres Escobar & Associe; XS Lighting & Sound

320 Leadership Center at Cedarbrook
Candela

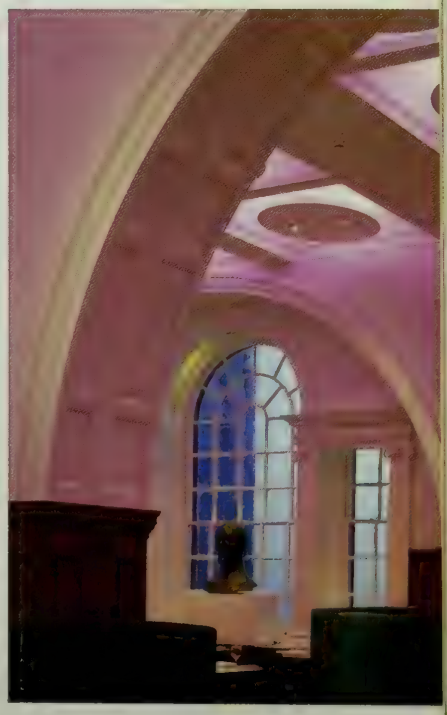
326 Royal Academy of Arts Restaurant
McInnes Usher McKnight Architects; DHA Designs

331 Lighting Products

Lighting helps to shape every type of architectural interior, but perhaps nowhere are expectations as high as in hospitality projects. For restaurants, nightclubs, bars, hotels, and conference centers, patrons have come to count on ambience as a major part of the social and aesthetic experience. And nowadays, it seems, lighting experts rank up there with star chefs or hot DJs as essential partners in plotting a successful venue.

This month, we present a trio of projects that follow different paths to successful lighting plans. Duvet, a New York City nightclub where diners literally crawl into bed for dinner, embraces the latest light-emitting diode (LED) technology to wrap surfaces in colored light. Interior designer Andres Escobar and Dougie Lazer, of XS Lighting & Sound, have collaborated on an adventurous space that catches the eye at every turn.

Daylighting is a key ingredient at Washington Mutual's new conference center at Cedarbrook in SeaTac, Washington. A key strategy employed by lighting designer Candela was to bring views and sunlight in, so conferencegoers on retreat wouldn't feel trapped in claustrophobic meeting rooms. The lobby of a similarly scaled chain hotel might have low-level illumination, but here the great room's ambient light levels are subtly elevated to support guests reading memos or conference reports.



In London, an uninviting and underperforming restaurant at the Royal Academy of Arts was refurbished and relit to raise the bar on style and service (right). McInnes Usher McKnight Architects worked with lighting consultant DHA Designs to wash the venue in colored light, in this case relying on cold-cathode fixtures. The original public access to the restaurant was somewhat hidden, so new signage and lighting raises its profile. Lighting the art was also a priority; celebrated murals by Fred Appleyard, Harold Speed, Gilbert Spencer, and Leonard Rosoman are illuminated for the first time, fulfilling the original intentions of the artists. And sculptures from the permanent collection by Royal Academicians, together with works from private collections, are spotlit throughout the restaurant. The revamped eatery now introduces a true sense of the artistic wealth represented by the Royal Academy, while the colored light also delights. *William Weathersby, Jr.*

Creative Uses

OVI sheds light on the saga of its Scottish Parliament commission



OVI took on the challenge of lighting dynamic spaces like the Grand Staircase.

The saga of constructing the new Scottish Parliament complex in Edinburgh is an intricate tale of political intrigue, massive cost and square-footage increases, and the untimely death of its principal design architect, Enric Miralles [RECORD, February 2005, page 98]. For lighting designers Jean Sundin and Enrique Peiniger, principals of New York City–based Office for Visual Interaction (OVI), the assignment's diversity of scope was a daunting trial of endurance. "The complex comprises some of the most dynamic three-dimensional spaces we have come across during our work as lighting consultants," Peiniger says. "Our comprehensive scope of work included every space of the 325,000-square-foot project (with the exception of basement and mechanical areas) and covered interior and exterior lighting, daylighting, and illumination for television broadcasting."

Interior spaces within the government facility, designed by the joint-venture team of architects EMBT and RMJM, range from an intimate café under a vaulted ceiling to a vast Debating Chamber seating several hundred people. Lighting solutions combine new technologies—sources such as light-emitting diodes, cool-color temperature halogens, and CDM metal halides—with custom craftsmanship to harmonize with the dynamic public and meeting rooms. Creative solutions range from luminaires cast in concrete walls to suspended pendants that cascade among vaulted ceilings and skylights.

"The daylighting solutions are fundamentally integrated," Peiniger says. The configuration of the leaf-shaped assembly buildings themselves, for example, serve as large louvers to shield the adjacent Debating Chamber from direct sun.

For office lighting inside the new assembly towers, the lighting team's goal was to minimize hardware costs. Standard surface-mounted, linear fluorescent fixtures were specified within cast-concrete profiles. The lamps were recessed into continuous slots sized wider than the luminaire profile to create a "shadow gap" on each side. Service equipment such as speaker and fire-safety mechanisms were integrated within the lighting systems. The luminaires are flush with the ceiling and arranged in bands, pulled away from the perimeter edge to emphasize the shape and configuration of the rooms. To maintain the overall nighttime appearance of the buildings, a fixture with a reflector minimizes brightness and avoids bright stripes on the concrete ceilings.

Recessed compact fluorescent downlights also work with the radial

PRUDENTIAL LTG.

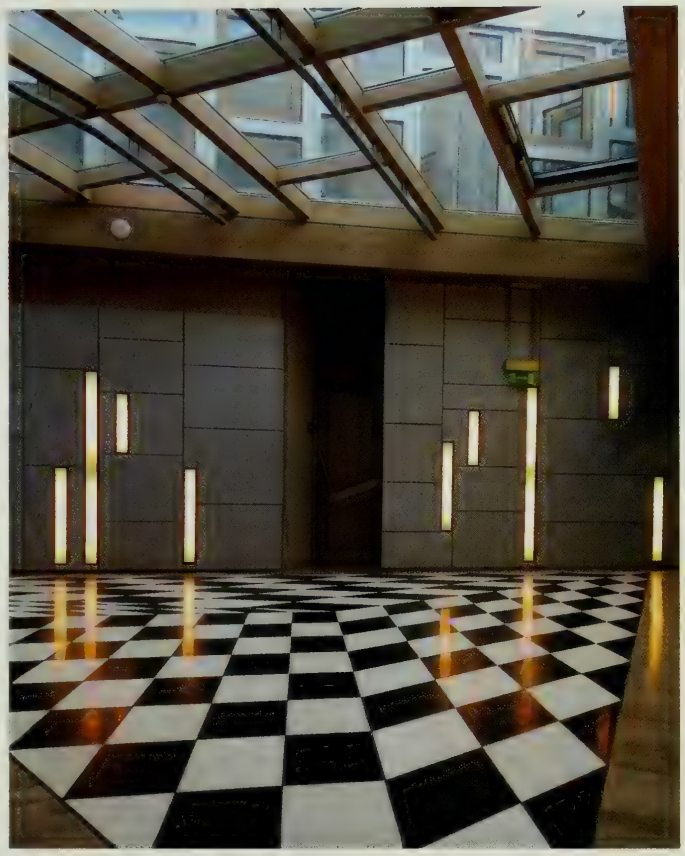
Life, Liberty, and the Pursuit of Happiness.

When you're in pursuit of inspired lighting ideas, you don't want the basics. You want total creative freedom. The kind you'll find on every page of the award-winning catalog of Prudential Ltg. Five striking new product designs join our extensive line of affordable, high-performance fixtures. For more on what's happening at America's most innovative lighting manufacturer, visit prulite.com.

1774 E. 21st St., Los Angeles, CA 90058 T 213.746.0360



Lighting solutions were engineered as extensions of the architecture.



pattern of the enclosed offices within the towers. Compact fluorescents support energy efficiency and flexible configurations while responding to the sculptural nature of the building. The downlight design was modified for installation in concrete.

For broadcast-ready committee rooms, a lighting language of slots and pendants appears decorative, while supporting strictly technical lighting instruments in specific sectors. The location and length of the slots was determined once all aiming angles and light-level calculations were satisfied. Pendants were grouped into clusters to minimize hanging points. The pendants are multistem, based on the architectural imagery of tree branches. They are design-engineered to allow lockable field adjustment in height and rotation of the luminaires.

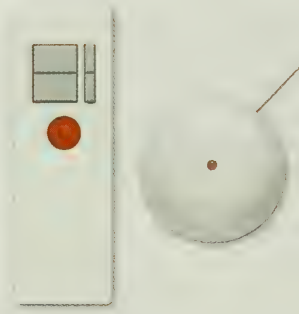
"Lighting solutions were engineered as an extension of the expressive architecture," Peiniger says. "The illumination is absorbed into the architectural forms, not applied, to allow the lighting and building to age together over time." *W.W.*



CIRCLE 134 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Light is everything.

Light affects people.
When the light is right, students learn more, employees are more productive, there are fewer health complaints and occupant comfort is increased.



IR hand-held remotes and receivers for personal control

Light is expensive.
Despite the fact that most lighting is energy-efficient, fluorescent lighting is still the primary source of energy consumption in most buildings.



Occupant sensors for energy management



Scalable from 1 to 32,000 fixtures

Light is daylight and electric light.
Both sources should be in harmony to keep people comfortable and productive, address building energy usage, and promote green design.



Photocells for daylight harvesting

Introducing EcoSystem™

Dimming ballasts for
fluorescent lighting



EcoSystem™
Light control that is simple and cost-effective.

Using the same basic components, build a system for a single lighting fixture in a single room, or for thousands of fixtures throughout an entire building.

Sensors and wallstations connect directly to any ballast— without interfaces or powerpacks — and share information with other ballasts throughout the system.

Over the life of the building, change or repurpose the space easily without costly rewiring.

Experience EcoSystem for yourself.
Call Lutron at **1.877.258.8766 ext 235**, or visit **www.lutron.com/ecosystem**.

See us at AIA Expo, **booths 1882 & 2473**.

LUTRON
Lutron controls your light...

CIRCLE 135 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Designing *with* LIGHT

Are you designing with light?
Now there's an easier way. At **www.designingwithlight.com** you can explore architectural lighting solutions, get budgetary pricing, lead times, fixture schedules and application guidelines – all in a personalized project workspace.

While visiting, also request our new visual selection catalog for **Designing With Light**.

Visit us at the AIA 2005 National Convention and Expo, Booth #1657.

© 2005 Genlyte Group LLC. All rights reserved. www.lightolier.com

CIRCLE 136 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



At the New York City nightclub **Duvet**, evocative lighting complements sybaritic interiors by Andres Escobar

By William Weathersby, Jr.

I'll admit I had some initial doubts about Duvet. The new Manhattan nightspot's motto, "Upscale dining while reclining," put me in mind of a post–*Sex in the City* scenario in which patrons in pajamas passed around hors d'oeuvres in bed, Hugh Hefner–style. In a club trend that seems to have migrated northward to New York City from Miami, Duvet joins another new Chelsea district venue, Bed, as the latest restaurant and lounge where guests take the term "laid-back" literally. Though standard dining tables ring Duvet's perimeter, most guests enjoy dinner and drinks while relaxing atop one of 30 oversize platform beds piled with pillows.

What might have become merely a one-note, over-the-top theme, however, has been orchestrated at Duvet with flair by interior designer Andres Escobar. A Colombian designer who emigrated to Montreal, he has introduced an imaginative viewpoint to this Manhattan nightlife landscape. With Venetian plaster walls, silver-leaf ceiling details, and art-glass fixtures, the 20,000-square-foot, two-level club is stylishly sybaritic. The standout element in the cocktail-hour mix is sophisticated, color-changing lighting that seems to infuse every surface.

Bringing Escobar's creative vision to life, lighting consultant Dougie Lazer of XS Lighting & Sound fitted, programmed, and installed more than 840 feet of Color Kinetics light-emitting diodes (LEDs). The linear runs of LEDs, which can be programmed to create more than 16 million colors, outline the glass bars, up- and downlight the platform beds, and wash Lycra ceiling scrims and nylon draperies.

Constructed of cast-glass panels lit by color-changing LEDs, the main bar has the look of moonlight or fire viewed through ice.

"The lights are fully enclosed in several areas, such as the glass bars, so their long source life and low maintenance were critical factors," Lazer says. "The club uses a tremendous number of lights, and since the LED-based fixtures are low-power, they are not running on high-voltage or generating a lot of heat," he says. Typically, the new-generation LEDs will perform for 100,000 hours, or more than 10 years, without requiring replacement, he notes.

A key set piece at Duvet is the 90-seat walk-around main bar. Inspired by blocks of ice illuminated at a party sponsored by a liquor company, Escobar decided to translate the look to a more permanent architectural mode. Vertical bar fronts are cast-glass panels with a texture simulating the surface of blocks of ice. Color-changing LEDs set at floor level backlight the glass, "so it's like seeing red flames or blue moonlight through an ice flow," Escobar says. Additional LEDs set within a trough





LED lighting beneath the platform beds and bordering nylon draperies creates an ethereal landscape (above). Lycra ceiling panels throughout the club serve as scrims for additional light projections (below).



LED fixtures change color cues frequently, accompanied by sweeps of light cast by automated luminaires (left). Wine storage cases lit by LEDs border the lavatory (below).



light the smooth glass bar tops. Nearby, conical cast-acrylic bar tables also feature internal LEDs, whose color changes are synchronized with the main bar. Ceiling-recessed MR16s provide bartending task lighting.

Another eye-catching effect is an illuminated 15-foot jellyfish tank near the main bar. "When the LEDs change color, the 100 jellyfish themselves absorb light and appear to change color, while the water seems to remain clear," Lazer says. (Note to Duvet patrons: On our recent evening visit, the jellyfish had been removed for tank maintenance, but management promised the mesmerizing effect would return soon.)

More than 75 LED units light the venue's ceiling throughout, while automated luminaires throw sweeping beams of light across pathways near the bed platforms. Elsewhere in the space, approximately 60 LED MR lamps generate scattered bursts of color. Because they are designed to retrofit standard MR16 fixtures and sockets, the lamps were easily mounted for multiple applications: beneath glass paving in the entryway, inside dining tables, and adding unexpected flair to the unisex bathroom, where a communal lavatory looks onto a glass-enclosed wine cellar. "The lamps were a good choice for the latter location, where low heat emission was vital to the storage of fine wines," Lazer says.

Though presenting a broad menu of "progressive American cuisine" by top chef David Coleman, Duvet's eating-in-bed ambience is admittedly an acquired taste. For the adventurous and agile clubgoer, however, Escobar and Lazer have created a comfort zone where one can enjoy the light show sparking the social fireworks. ■

Project: *Duvet, New York City*
Interior and (conceptual) lighting designer: *Andres Escobar & Associe—Andres Escobar, principal*
Lighting consultant: *XS Lighting & Sound—Dougie Lazer*
Architect: *RIP Construction Consultant*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Sources
LED lighting and controls: *Color Kinetics*
Custom lighting fittings: *XS Lighting & Sound*
Automated luminaires: *Elation; High End Systems*
Glass: *Think Glass by Mailhot*
Ceiling: *Lycra*


Circa
Form 10



Descending from above to change the world of site lighting, Circa is an inspired design, a perfect symmetry subtly sculpted to appeal at every viewing angle. Now, there is also the exciting option of electrifying color by way of an illuminated LED halo. Circa is the latest and surely most stunning series of high performance luminaires from Gardco. Integrated pole top luminaires that subtly eliminate mounting arms, an elegant post top and a building mounted sconce, all feature legendary Gardco glare-free, sharp cutoff illumination. Circa. Bold. Elegant. Inspiring. And entirely new.

GARDCO
LIGHTING

www.sitelighting.com

CIRCLE 137 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Candela fills the **Leadership Center at Cedarbrook** with plentiful daylight and ambient illumination

By Alice Liao

At the Washington Mutual Leadership Center at Cedarbrook, residential-style interiors, waterside trails, and outdoor terraces overlooking a verdant campus invite employees on retreat to leave the chaotic business world behind. Designed by architects GGLO, the 107,00-square-foot conference center is 5 minutes away from SeaTac International Airport on an 18-acre site that was selected for its convenience to the insurance company's out-of-town staff. The property's 8 acres of wetlands, which were restored by the client and deeded back to the city of SeaTac, are the center's focal point. Two lodging buildings contain a total of 110 guest rooms, while the main structure houses a variety of meeting and entertaining spaces.

The interiors evoke the Pacific Northwest landscape with soothing color palettes and natural materials, including native fir and cedar. Wraparound windows offer sweeping views of the restored wetlands and bring plentiful daylight inside. Lighting consultant Candela built upon the generous daylight with an illumination plan that enhances the architecture, creates a comfortable ambience, and promotes sustainability.

"Even though the project was not submitted for LEED certification, the design team was encouraged to pursue everything possible to create a sustainable building," says project lighting designer Mary Claire Frazier. "From a lighting point of view, that meant achieving energy savings and avoiding light trespass in the wetlands."

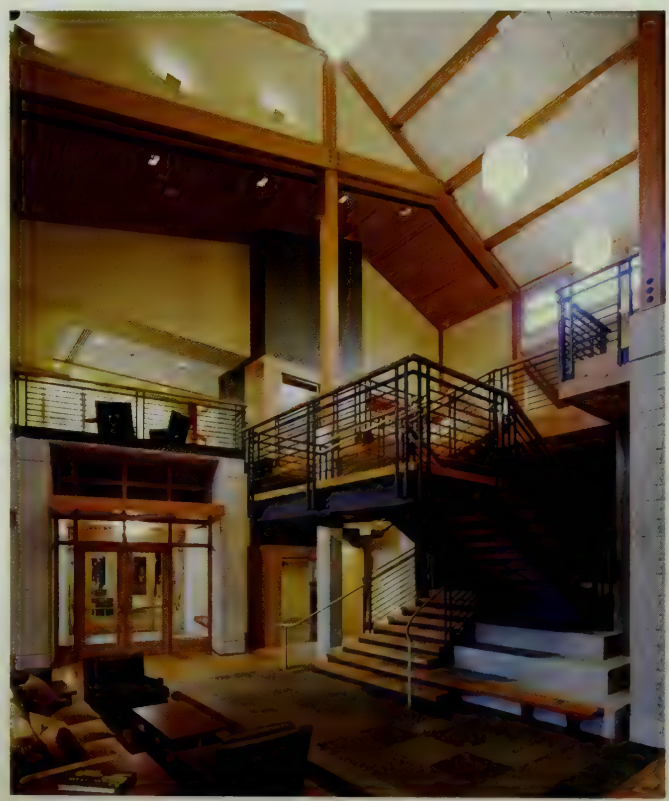
Dimming systems and compact fluorescent sources anchor the interior lighting. Incandescent lamps are kept to a minimum and dimmed to extend their lamp life. In areas receiving abundant daylight, little or no supplemental illumination is required during the day, further reducing energy consumption. Even up against Washington State's strict energy guidelines, "we came in under code by 15 percent," Frazier notes.

In the guest check-in area of the main conference building, broad windows and clerestories wash the lobby and adjacent great room in sunlight. At night, custom pendants with linen diffusers work in tandem with ceiling-recessed MR16 accent lights to provide ambient illumination. Additional wedge-shaped uplights help define the 30-foot-high ceiling. According to Frazier, ensuring sufficient brightness in the vast space was a challenge because fixture locations were limited by the central staircase and the openness of the interior architecture. And unlike

Alice Liao is a freelance writer based in Teaneck, New Jersey. She specializes in lighting and interior design.

Project: *Washington Mutual Leadership Center at Cedarbrook, SeaTac, Washington*
Lighting designer: *Candela—Mary Claire Frazier, IALD, project manager*
Architect, landscape architect, interior designer: *GGLO—Jim Moore, Carol Schaefer, principals; James Bradley, project architect; Dwight Doty, Pamela Trevithick, Jennifer Thuma, Wendy Personett, Kirsten Malone, project team*
Consulting landscape architect: *Hewitt Architects*





Exterior lighting for the center at Cedarbrook relies largely on custom pendants fitted with metal halides (above). Floor and table lamps support reading in the great room (opposite). Pendants, uplights, and MR16s light the arrival zone (below).



Sconces and ceiling-mounted fixtures provide low-key ambient illumination in the main restaurant (above). A conference room balances daylight with uplights set within a soffit, downlights, and accent lights grazing the wall opposite the windows (below).



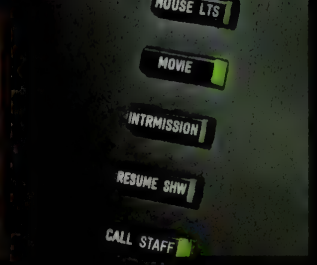
typical hospitality lounges, where 5 to 10 foot candles is standard, corporate guests who might want to read memos or reports in the great room would require light levels approaching 15 to 20 foot candles. Table and floor lamps placed throughout the room support "serious reading" while reinforcing the venue's residential ambience. Niches designed for smaller gatherings are intimately lit with soffit-mounted MR16 downlights.

While each building hosts an array of informal breakout areas, the major meeting facilities house two conference rooms (one of which can be subdivided into three smaller spaces), a prefunction space, and a

DAYLIGHTING IN CLASSROOMS AND GATHERING SPACES HELPS TO ALLEVIATE THE "TRAPPED IN A MEETING" FEELING.

120-seat auditorium. Accommodating everything from informal presentations to Webcasts and televised press conferences, the auditorium has a flexible lighting system fully integrated with the high-end audiovisual equipment. Tucked above a series of ceiling panels, pairs of fluorescent covelights direct light toward the front and back of the room. Recessed in the sides of desks, light-emitting diode steplights assist with wayfinding when the auditorium is dark. Flexible task lights at each seat support note taking. Decorative sconces and compact fluorescent wall washers illuminate the perimeter of the auditorium for even light distribution, an important requirement for television cameras.



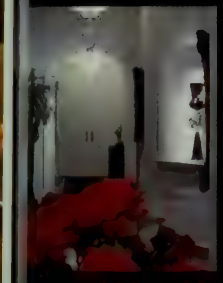






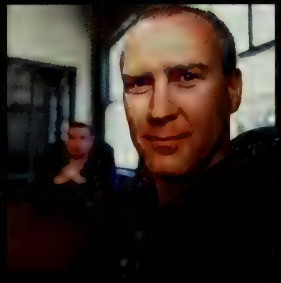

LITETOUCH LIGHTING CONTROL.






NOW CHANGING LIVES AT A VENUE NEAR YOU.












Convenience. Security. Efficiency. Beauty. Kitchens, bathrooms, great rooms, halls. Among the makers of residential lighting control systems... LiteTouch was the first with low-voltage control and dimming systems for use in homes. The first to introduce a micro-processor-based system and to offer astronomical time-based events, among other technological firsts. But the LiteTouch "firsts" that people really remember are these: LiteTouch is the first and only lighting control



manufacturer to provide support and upgrade possibilities to past customers and the first with a lifetime warranty. The more things change, the more LiteTouch's commitment to customer service remains the same.





Visit us on the web at www.LiteTouch.com, or call 888-LITETCH.

LiteTouch®
Brilliant Solutions in Lighting Automation

CIRCLE 138 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





The furnishings and lighting in suites (above left) and guest rooms (below left) aim for a residential ambience that surpasses that of a boutique hotel. Multitask lighting includes compact fluorescent fixtures and zoned downlights.

Conference rooms feature a combination of covelights and downlights, which are lamped with fluorescent sources operated on dimmers. In rooms where daylight is available from windows along one side, this bright light is balanced by asymmetric covelights set above the windows and wall washers grazing the opposite wall. A zoned control system further regulates lighting for the comfort of meeting participants.

In the gallery that serves as a prefunction room, Frazier maintained the openness of the ceiling cavity by lighting it with two T5 lamps concealed in a perimeter cove. Pendants matching those in the lobby reappear here to punctuate the long, narrow space. The same pendants are also repeated in guest-room buildings, where they set the tone in lounges and suggest a visual continuity throughout the facility. The three buildings are linked by a covered passageway lit with custom metal pendants fitted with 70-watt metal-halide lamps.

In the main restaurant, wall sconces and ceiling-mounted fixtures provide elegant yet low-key lighting, and MR16s accent artwork and buffets. In the library, where the ceiling is lower and the setting is more informal, a row of downlights adds punch above a pool table.

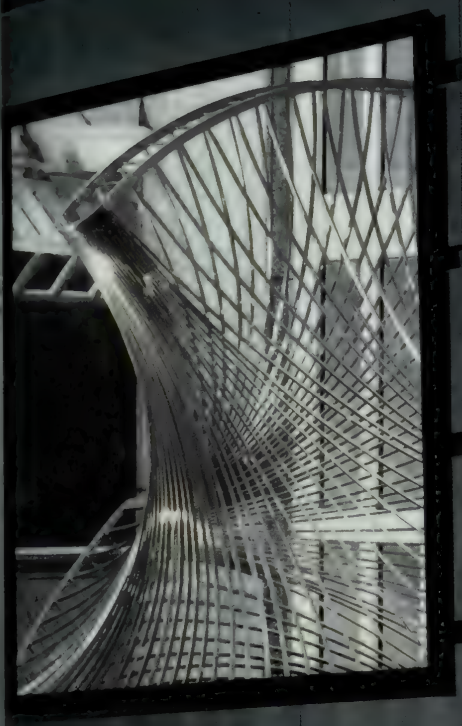
For Washington Mutual, this training facility has been popular with employees, while reflecting a corporate culture that aims to give back to the community: Plans by the city will allow local residents to enjoy the wetlands and the trails along the periphery of the property. ■

Sources

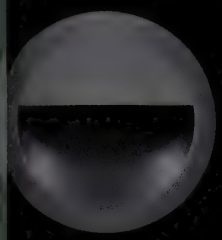
Compact fluorescents: *Portfolio*
Accent lights: *Edison Price*
Indirect coves: *LAM*
Sconces: *Boyd; Global Lighting; Eureka; Belfer; Zaneen*
Table and floor lamps: *Global Lighting; Nessen*
Exterior pendants: *Rebelle*
Task lites: *Littlite*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

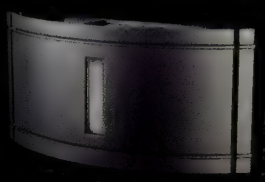
INVUE™



Art through Innovation
Style + Performance









THE CULTURE OF LIGHT

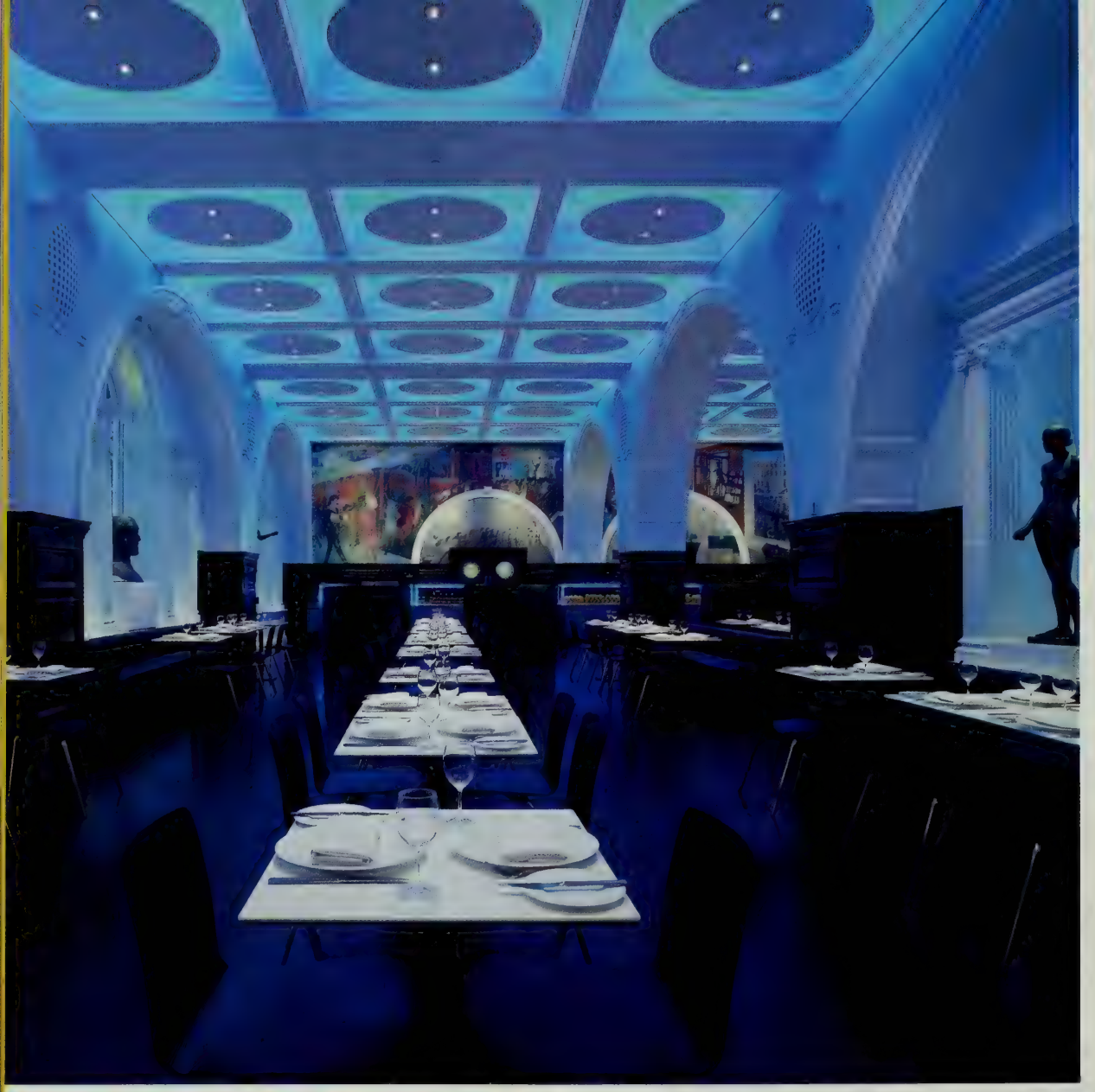
Lighting is an integral element of our culture. Whether for security, general illumination or aesthetic highlighting, how we create and use light to enchance the view of our world today is a direct reflection on the tapestry of our society.

Invue lighting systems embrace this assocation as a unifying theme for our product creations. Luminaires that blend into their environments while providing controlled illumination to enhance them.

COOPER Lighting

CIRCLE 139 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

www.cooperlighting.com



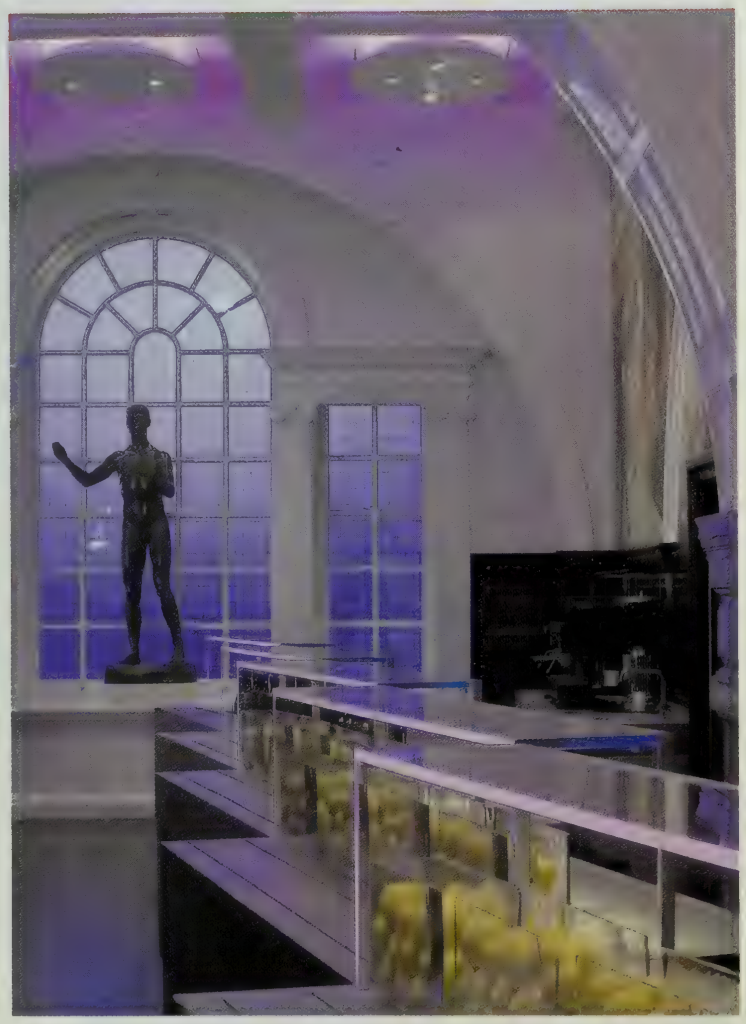




New disk pendants se into the Royal Acader restaurant's Classica ceiling coffers shield cold-cathode lamps that uplight the ceilin (this page and oppo- site). The lighting is programmed to chang from a daytime settin of warm, white light t dramatic hues in the evening. The disks are made of a sound- absorbent material t improve the room's acoustics. A screen outside the window is lit by metal halides.

Colorful lighting graces Classical art and architecture at the **Royal Academy of Arts Restaurant**

By Leanne French



When museum officials at the Royal Academy of Arts (RA) decided its dining area had lost its luster, they launched a competition to revitalize the Classical space designed in 1885 by Richard Norman Shaw. Six firms competed to revamp the restaurant to honor the RA's high profile as one of London's premier art institutions, which is housed in the West End's historic Burlington House. The winning design team, McInnes Usher McKnight Architects (MUMA), was selected in part because of its imaginative use of lighting. New color-changing effects now cast a bold image for the dining area while respecting original architectural elements. The reworked lighting plan also helps to better celebrate art within the space.

MUMA principal Stuart McKnight explains that the restaurant, which had been updated only three times since Shaw's conception, had recently devolved into a gloomy, noisy venue suffering from drab lighting, dark wood finishes, and uninspired wall colors. Poor space planning and acoustics also plagued the rooms. And though situated on the ground floor, the space lacked adequate daylight because of the close proximity of neighboring buildings. "We wanted to use light and sound to transform the restaurant without disturbing its historic fabric," says McKnight.

The design team began by creating a blank canvas for the lighting with a neutral envelope of white walls and ceilings. A Grade 1 Listed Building (the highest listing in the U.K.) such as the RA "is highly cherished, and any alterations, even colors, are carefully controlled," explains McKnight. "Our approach was to emphasize the positive aspects of the existing space, paying particular attention to art incorporated within the building's fabric. By using simple furnishings and neutral colors, we created a calm environment in which existing wall murals could be accentuated."

To execute its lighting concepts, MUMA teamed with the lighting firm DHA Designs, which had already established a relationship with the RA after consulting on various temporary exhibitions and on its retail shop. The restaurant's lighting scheme had to convey two moods, one for high-volume, self-service dining during the day and a more formal ambience for waiter-service dining in the evening. "During the day, the ambience is light and airy," McKnight says. "At night, this transitions to a more intimate setting through the introduction of rich colors."

Existing lighting fixtures, which included wall-mounted spheres and clusters of MR16 tungsten lamps hung from the ceiling, were replaced with acoustically absorbent elliptical disks designed by MUMA and hung from the rectangular panels of the coffered ceiling using lengths of white chain. "Above each suspended disk are three rows of 20-millimeter-diameter [.8 inch] cold-cathode tubes," says DHA designer Peter Fordham. "Each row makes up an ellipse, consisting of two curved arcs, making it easy to replace tubes in the future."

The suspended elliptical disks uplight the coffered ceiling and also provide a location for recessed MR16 spotlights to subtly wrap dining tables in a "cocoon of light," McKnight says. The light fixtures also provide an acoustically absorbent surface distributed evenly throughout the space, while the adjustable MR16s illuminate artworks set throughout the rooms. Large murals placed in archways are front-lit by pairs of MR16 profile projectors, which are shuttered so each beam of light tightly focuses on the exact dimensions of a panel.

The neutral backdrop of the room now accentuates changing colored lighting scenes, which transform the dining experience and help to attract a younger crowd at night. Cool blue lighting harmonizes with live jazz on Friday nights, when curved leather banquettes can be rotated 90 degrees to create a separate area for predinner drinks. A minimum of

Leanne French is a freelance writer based in New York City. She is a frequent contributor to the special lighting section of RECORD.



The RA's Classical sculpture is illuminated by adjustable LEDS that cast warm white light (above). Daytime settings of white light yield to colorful nighttime effects (below).



10 lighting scenes are programmed to change the ambience from shades of pink, red, and purple, then back to white for daytime. The servery units, which are lit from below by LED luminaires, can also be programmed to change colors to complement the overhead illumination.

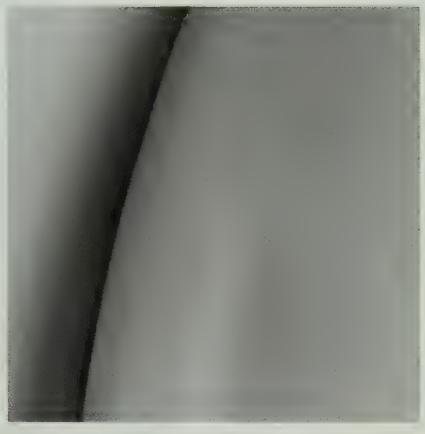
Lighting even helps to conceal an unsightly external fire escape, which is masked by translucent screens washed with blue light from external metal-halide floodlights mounted at a low level. Metal-halide floodlights mounted above the exterior of the windows cast a pale-blue backdrop onto three white-glazed brick panels across from the customer service lane. McKnight says once additional funds become available, he hopes to project digital art onto these surfaces. It's a gesture that will further update the space, connecting historic art and architecture with contemporary innovation. ■

Project: *Royal Academy of Arts Restaurant, London*
Architect: *McInnes Usher McKnight Architects (MUMA)—Stuart McKnight, principal*
Lighting designer: *DHA Designs—Peter Fordham, project designer*

Sources
Wall washers: *Zumtobel Staff*
Downlights: *Lucent*
Mural spotlights: *TSS Lighting*
Cold cathode: *Kemps Neon*
Exterior floodlights: *BDC*
LEDs: *AC/DC Lighting*
Lighting controls: *Dynalite*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Inspired by Light



www.seegreatshapes.com

CIRCLE 140 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Arts & Crafts™

Designed with the energy efficiency and optical performance of a modern luminaire, the Arts & Crafts reflects the style and warmth of the Craftsman era.



Arts & Crafts with Copper Shade*

Arts & Crafts with Mica Shade

* IDA-Approved™ Dark-Sky Friendly versions of this luminaire are available.

IDA Dark-Sky Friendly® Seal of Approval

AAL ARCHITECTURAL AREA LIGHTING

HUBBELL™ Hubbell Lighting, Inc.

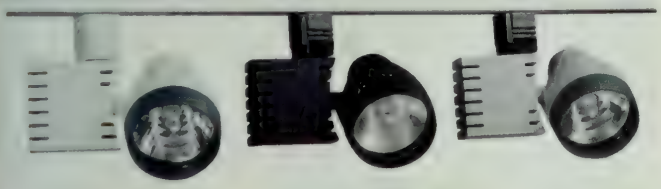
www.aal.net

CIRCLE 141 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Lighting Products

▼ Smallest metal-halide track spot

According to Amerlux, the company's new Topaz T4 is the smallest energy-efficient metal-halide track luminaire on the market. Utilizing the 20-watt T4 ceramic metal-halide lamp and the latest in miniature ballast technology, the Topaz T4 is engineered for small size, maximum performance, and longer life. Crafted with a die-cast aluminum lamp and ballast housing, the lamps are ideal for new construction as well as retrofit locations to replace halogen line and low-voltage incandescent fixtures. Amerlux Lighting Solutions, Fairfield, N.J. www.amerlux.com **CIRCLE 200**



► Brighter tile design

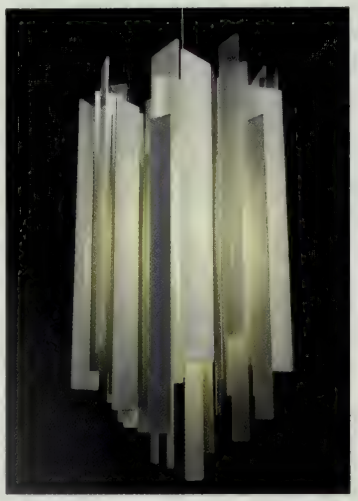


Light Tile, from Villeroy & Boch, features a LED lighting component integrated into individual wall and floor tiles. The dust- and waterproof Light Tile fixture is embedded into the tile, protected by a wear-resistant, coated-stainless-steel frame fitted flush to the surface. The 12-volt light is available in white, blue, and amber, and can be partnered with a selection of Villeroy & Boch tile styles. On square tiles, the 1½" lighting element is centered; on rectangular tiles, one or two lighting elements can be positioned along the central axis. Villeroy & Boch, Monroe Township, Pa. www.villeroy-boch.com **CIRCLE 202**



▲ Striation-free beams

Peerless Lighting makes its debut into interior architectural floodlighting with Lightfoil 2 and 3. Designed for contemporary, large-scale environments, Lightfoil's refined optical-system design produces an abundant, striation-free beam with a ceiling brightness gradient equal to or smoother than any other floodlighting product, according to the manufacturer. The curved wing is composed of Reynobond composite in a white, silver, or bronze finish. Peerless Lighting, Berkeley, Calif. www.peerless-lighting.com **CIRCLE 204**

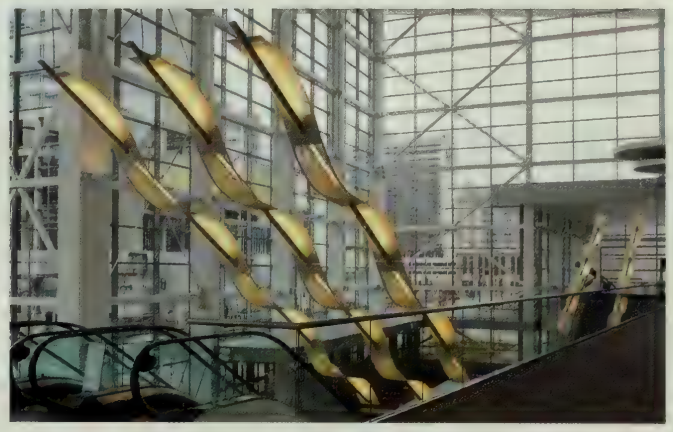


◄ Light mobiles

London-based designer Miranda Watkins has created a new series of Modernist mobiles and custom lighting installations that demonstrate her knowledge of materials. The made-to-order lighting installations are constructed from Perspex and anodized-aluminum panels that cascade in clusters around a central light source, diffusing the light randomly while creating visual patterns. The aptly named Random light, shown at left, is the first in the series. Miranda Watkins, London. www.mirandawatkins.com **CIRCLE 201**

▼ Ribbons of light

For the Colorado Convention Center expansion project, Lam Partners of Cambridge, Massachusetts, was retained to work with the Fentress Bradburn project team on the interior and exterior lighting. To illuminate the escalators and stairs, the team chose Onda, a suspended, linear indirect/direct light that provides softly diffused undulations of glare-free light. Ribbonlike extruded aluminum waves form curvilinear shades along Onda's 6', linkable module lengths. Luxo, Elmsford, N.Y. www.luxous.com **CIRCLE 203**



► Brainy bollard

The Annapolis Smart Bollard is the first bollard with integrated solar-powered lighting provided by advanced LED technology, according to Landscape Forms. The bollard was developed in response to customer requests for a lighted bollard designed for use in areas where wiring is neither feasible nor convenient, or where security demands lighting that is off the grid. Under typical conditions, it will run for up to 15 hours per day and requires 3 hours of daylight to recharge. With a fully charged battery, Smart Bollard can operate up to 150 hours without recharging. Landscape Forms, Kalamazoo, Mich. www.landscapeforms.com **CIRCLE 205**



Lighting Products



◄ Arts & Crafts light design

Architectural Area Lighting's new Arts & Crafts product line features a lightly diffused lens option for glare-free illumination. The Arts & Crafts line utilizes efficient lamp sources and an electronic ballast option for better color rendering and efficiency. Hood finishes include stainless steel, copper, opal acrylic, mica, and painted aluminum. Mounting configurations include post top as well as wall and pendant mount. Architectural Area Lighting, La Mirada, Calif. www.aal.net **CIRCLE 206**

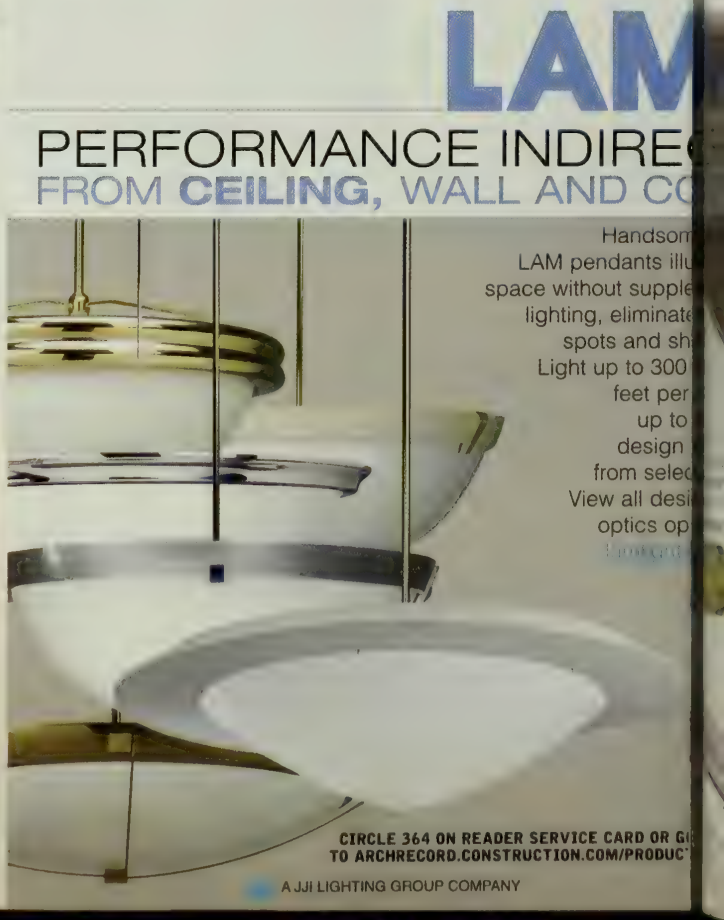
▼ Pure lighting effects

Ledalite has introduced PureFX, a recessed lighting system that offers controlled brightness and significant energy savings over traditional recess fixtures, according to the manufacturer. PureFX provides these features through the use of Ledalite's MesoOptics technology, a holographic material that produces diffuse patterns of pure white light that are highly controlled and directed. PureFX uses up to 36 percent less energy than standard fixtures and comes in a range of lamping options and housing sizes. Ledalite Architectural Products, Langley, British Columbia. www.ledalite.com **CIRCLE 207**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.







▲ Little brother of a classic

Louis Poulsen's recognizable PH Artichoke pendant is now available in a smaller size better suited for use in small spaces in commercial and residential projects. The 18.9"-diameter PH Artichoke is available in three finishes: brushed copper, brushed stainless steel, or white painted steel. The light consists of 72 leaves that eliminate glare by concealing the light source from all angles. The original lamp was designed exclusively for the Langelinie Pavilion in Copenhagen Harbor almost 50 years ago. Louis Poulsen Lighting, Fort Lauderdale. www.louispoulsen.com **CIRCLE 208**

► Layered light fixture



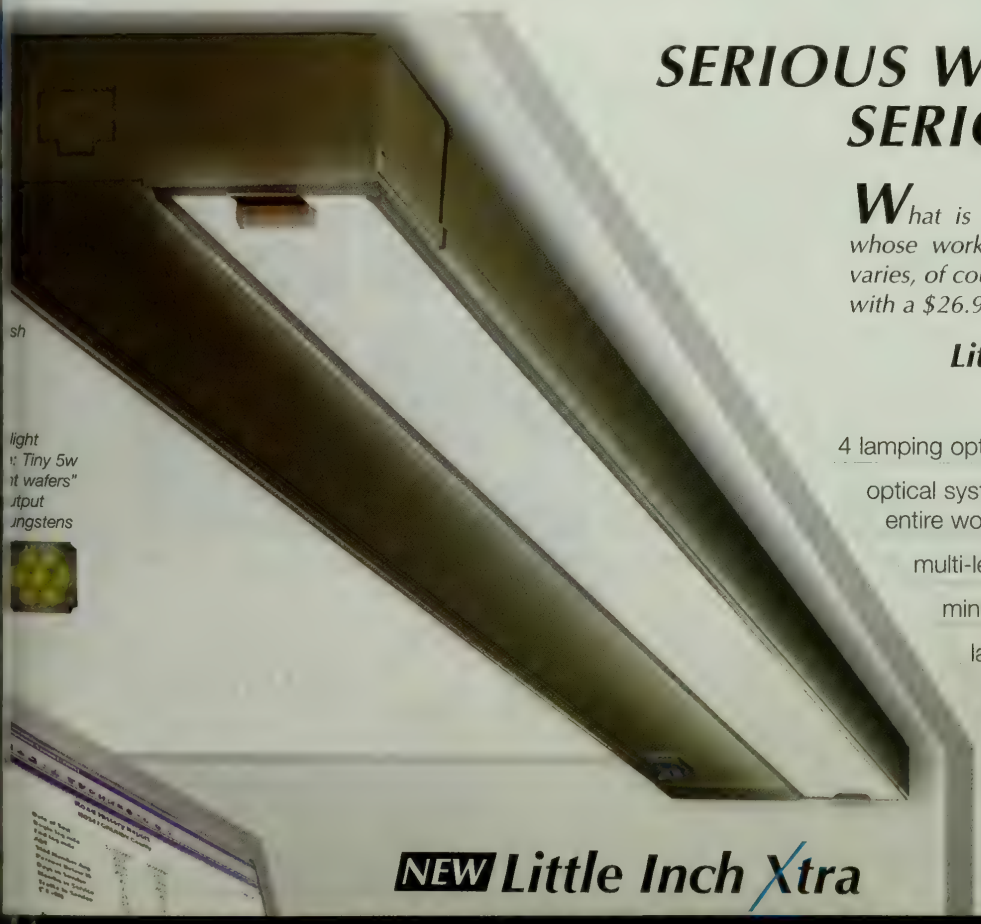
Strato Rectangle provides evenly distributed, glare-free, ambient interior downlighting in a textural 3D fixture design. The fixture is ideal for a range of commercial interiors, including upscale retail, professional offices, hospitality, and health-care facilities. Strato Rectangle is constructed from an all-aluminum body with a sand-blasted opal glass lens. It can be specified for ceiling or wall mounting and is ADA compliant. D'ac Lighting, Mamaroneck, New York. www.daclighting.com **CIRCLE 209**



▲ Airfoil form luminaire

Beta Lighting's Aviator Area Lighting series of architectural luminaires is available in a segmented Type II and Type IV optic and meets full IESNA cutoff classification. The housing is a rugged, one-piece die-cast aluminum casting with integrated mounting arm. Two housing sizes are offered: a 400-watt version measuring 18½" wide by 19.6" deep and a 175-watt version measuring 12" wide by 14" deep. In either size, the luminaires can be mounted in multiples of up to four on a single pole with no special mounting hardware. Beta Lighting, Sturtevant, Wis. www.beta-lighting.com **CIRCLE 210**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



SERIOUS WORK DESERVES SERIOUS LIGHTING

What is the annual investment in an employee whose work area lies under a shelf or cabinet? It varies, of course. But it's thousands more than lighting with a $26.95 bulb-in-a-box can justify!

Little Inch Xtra: greater payback on task lighting investment

4 lamping options: LED, fluorescent, xenon, halogen

optical systems for superior control of light over entire work surface

multi-level lighting (dual levels with LEDs)

minimal heat transfer

lamp life of 2,000... 10,000... 20,000 ... or 50,000 hours

lifetime warranty: all components except lamps and transformers... *10 year warranty on LEDs*

CIRCLE 142 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

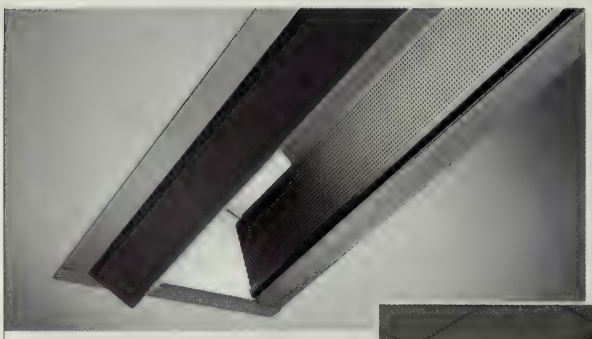
ALKCO

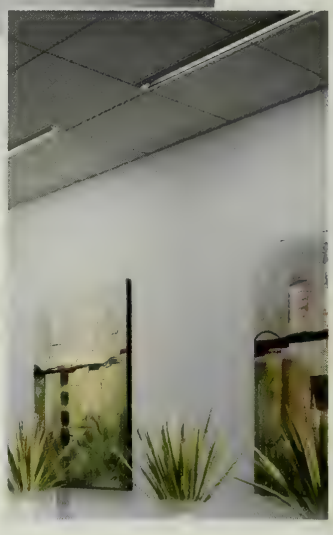
Lighting Products



◄ Large-scale sconce

As an extension of the Aliante lighting system, Ivalo Lighting has launched its new large-scale Aliante exterior sconce. The first of a series of introductions for this year and next, the sconce's 5'-long steel shell is created from .060"-thick steel using cutting-edge automotive stamping techniques. The elongated shell is available in lustrous silver or bronze powder coat as well as custom powder coat colors. The product is gasketed for wet rating, has UL approval, and comes in a choice of 120-volt and 277-volt dimming and nondimming options. Ivalo Lighting, Willow Grove, Pa. www.ivalolighting.com **CIRCLE 211**





▲► New lighting avenue

Harnessing the power of a single T5/T5HO lamp, Avenue A utilizes a precision-formed micro-optic that delivers high levels of vertical illumination and washes walls with shadow-free light. The 2" aperture disappears into the ceiling, and the design allows for installation into either grid or drywall ceiling applications. Placed 24" to 30" from the wall, Avenue A is ideal for classrooms, conference rooms, corridors, featured walls, and for highlighting artwork. With less than a 3" aperture, the frosted-acrylic lens of the Avenue B version produces soft, glowing, direct illumination. Focal Point, Chicago. ww.focalpointlights.com **CIRCLE 212**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

HUBBARDTON FORGE · access LIGHTING · HAMPSTEAD LIGHTING AND ACCESSORIES · LBL Lighting · A19 · sea gull lighting



THOUSANDS OF LIGHTING PRODUCTS AVAILABLE ONLINE • PROJECT MANAGEMENT TOOLS • SPECIAL PRICING TO THE TRADE

Exclusive Offer!
Visit the address below for more information
http://www.lightinguniverse.com/ar

Lighting Universe.com
888.404.2744
info@lightinguniverse.com
http://www.lightinguniverse.com/ar

CIRCLE 143 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



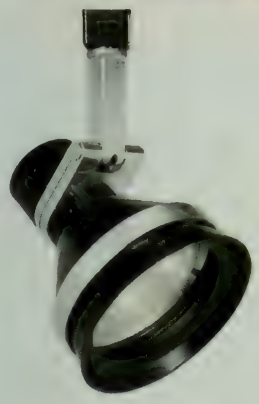
ARCHITECTURAL DETAILS

10930 116th Ave. NE, Kirkland, WA 98033
(425) 822-1292 • FAX (425) 822-1263 • www.arch-details.com

Purchase online at http://www.lightinguniverse.com.

CIRCLE 144 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PRECISION SPOTS









or a broad range of applications where high-performance, fit and nish are critical, W.A.C. Lighting's new "Precision Spots" feature pscale, specification grade die cast aluminum track heads with a ophisticated, clean style. The luminaires feature precision orizontal aiming, vertical locking capabilities, concealed wiring nd abrasion resistant powder coat finishes.

el.800.526.2588
/aclighting.com

W·A·C | LIGHTING
Experience the value. Value the experience.

CIRCLE 145 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



UPLIGHT / DOWNLIGHT

Compact Fluorescent

Metal Halide

QL Induction

DELRAY LIGHTING INCORPORATED

www.delraylighting.com

CIRCLE 146 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

SuperLite Solution.



Mark Thomson Associates, AIA
Fairmount Water Works
Interpretative Center,
Philadelphia
SuperLite II-XL / GPX 60-minute

fire glass

The SuperLite™ / GPX™ Solution

- **SuperLite I™** – Specialty tempered
- **SuperLite I-XL™** – Radiant heat reducing specialty tempered
- **SuperLite II-XL™** – Transparent fire resistive glass walls
- **SuperLite C™** – Clear fire protective ceramics
- **SuperLite I-W™** – Safe wired glass
- **GPX™** – Aluminum fire resistive wall framing

USA MFG.

Your First Source for Fire Rated Glazing Solutions Since 1982

CIRCLE 300 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/

www.safti.com 888.653.7233

SAFTIFIRST
FIRE RATED GLAZING SOLUTIONS

Products

Contract Carpet

New technologies in **contract carpet** not only make way for products that are more sustainable, comfortable, and maintainable, but allow for more sophisticated patterns and color palettes. Specifiers can also **easily visualize the end result** through an array of user-friendly carpet design software. *Rita Catinella Orrell*

New carpet collaboration influenced by man-made and natural formations

Milliken Carpet and SOM Collaborative have launched Way, a 36" modular carpet collection with 3D designs that depart from traditional inspirations such as art and fashion toward man-made structures and geological formations.

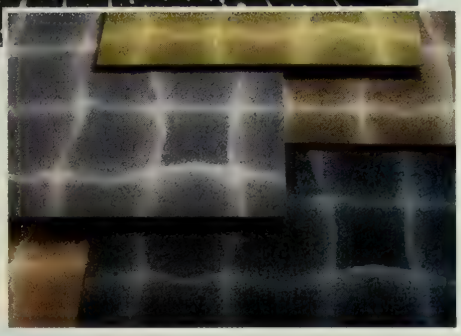
The collection utilized Millitron, a new high-definition printing technology from Milliken that allowed SOM and Milliken designers to create fine gradations of color and layers of visual texture that simulate dimension. Milliken also reformulated colors to achieve palettes in six high-contrast color families, including blue-blacks, browns, greens, silver-blues, reds, and charcoals.

The three design families in the line include Riverbed, which captures the illusion of light on water; Urbanscape, influenced by cityscapes and aerial shots of highways and traffic; and Forcefield, inspired by images of bridges, airports, and city blocks. Each design family includes three patterns that increase in complexity and scale.

Using Pattern Builder software, developed by the collaborative, users can click and drag modular designs onto a grid and rotate them in any direction to compose their own graphic art.

According to Milliken, Way is 100 percent sustainable and can be renewed through the firm's Earth Square process or recycled by other means. Milliken Carpet, LaGrange, Ga. www.millikencarpet.com CIRCLE 213





Urbanscape (above) was inspired by aerial shots of traffic. Geological formations such as glaciers and lakes influenced Riverbed (right). Both patterns are available in three scales.

Coordinating tile and carpet palette

Crossville has designed its new Color Blox porcelain stone tile collection to coordinate with Bentley Prince Street's broadloom and carpet tile products. The smooth, unpolished surface of Color Blox is softened by shade variations from tile to tile, which imparts a handcrafted look while making it easier to match the tile with other finishes and furnishings. The collection features a palette of 20 hues.

"This collaboration will allow specifiers to easily create unique tile installations of multiple sizes and colors, or accent a basically solid tile floor with blocks of color—then tie it all together with a coordinating Bentley Prince Street carpet or carpet tile in a neighboring area," says Jim Dougherty, V.P. of marketing and business development for Crossville.



The two companies' marketing initiatives will include advertising and online marketing campaigns to inspire specifiers to coordinate their products in commercial and residential projects. Crossville, Crossville, Tenn. www.crossville.com CIRCLE 214

Comprehensive backings binder

As an aide to specifiers, The Mohawk Group has created the *Architects Folder* devoted to carpet backings, with cut samples and definitions of each. The 11 systems in the folder include UltraSet Modular Systems, the company's first hard-back modular tile system. A thermo-stable structured backing of several composite materials, UltraSet is now being incorporated into all Mohawk Commercial and Bigelow Commercial carpet tiles. Another new addition is BioCel, a polyurethane backing that not only increases the carpet's life, but also combines renewable and recycled resources. The technology teams Celceram, a highly refined mineral endorsed by the Environmental Protection Agency, with BioBalance, a rapidly renewable resource from soybean oil. The backing systems utilizing this technology contain an average of 50 to 55 percent postindustrial content, 7 to 15 percent consumer content, and 7 to 10 percent renewable resource. The Mohawk Group, Kennesaw, Ga. www.themohawkgroup.com CIRCLE 215



▼ High-tech carpet patterns

Thought Patterns is the result of a collaboration between Lees Carpets and Tricycle, a company that offers technology, products, and services to the manufacturers of contract interiors. Thought Patterns allows users to choose from 165 patterns and 20 colorways, manage personal project folders, view their choices placed in room settings, and order high-definition "Techno Images" to be delivered within 48 hours. Lees Carpets, Glasgow, Va. www.thoughtpatterns.com **CIRCLE 216**





◄ Wool/alpaca blend

Woolshire Carpet Mills is the first U.S. manufacturer to introduce a carpet made from a blend of 80 percent New Zealand wool and 20 percent Alpaca. This fiber, from the fleece of a member of the llama family, is found naturally in 22 distinct colors and can be blended to produce an array of natural shades. The eight colors in the line range from soft beige to gold—all made without the use of dyes. Woolshire Carpet Mills, Calhoun, Ga. www.woolshire.com **CIRCLE 217**

► Fiber front-runners



Solutia's 16th annual Doc Competition for contract interior design was held last December in New York City. The competition recognizes outstanding achievement in contract projects and products that feature Solutia Ultron nylon 6,6 fiber. The winners of the Product Design award include Bentley Prince Street for Moda Velvet (above); Constantine Commercial, for Precision Loc and Isobar; Fortune Contract for Loommate; and Invision Carpet Systems for Edge. Solutia, St. Louis. www.solutia.com **CIRCLE 218**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



THE BUSINESS OF ARCHITECTURE: 2003 AIA FIRM SURVEY

Access the latest, most comprehensive information on today's architecture marketplace

The Business of Architecture is the most reliable source of information on the business practices of U.S. architects. Responses from architecture firms nationwide have been compiled to bring you the latest financial benchmarks and management strategies of AIA-member-owned firms.

Major topics include: financial performance, services and sectors, marketing spending, professional liability, technology investment, and international practice.

This report organizes findings by region and firm size and includes charts and tables for fast, easy access to the information you need to stay competitive.

To order your copy, go to *aia.org* and click on AIA Store or call 800–365–2724.

AIA members: $125/PDF, $150/book
Retail: $329

▼ Hand-knotted hemp area rugs

Soroush Hemp Rugs are organic area rugs available in a natural hemp color as well as a range of other tones. Hand-knotted in a choice of cut pile, loop pile, and a cut/loop combination, the rugs are also available in hemp-wool blends. For both public and private spaces, the rugs come in sizes up to 30' x 50'. Soroush dedicates 5 percent of the profit from its rugs to the education of Tibetan children under the direct auspices of the Dalai Lama. Soroush Custom Rugs, Kensington, Md. www.soroush.us



CIRCLE 219



◄ Neutral and nubby

A natural nubby texture resembling a knitted bouclé fabric defines Fabrique, a new offering from Karastan Contract. The highly tactile characteristics are achieved by use of air-twisted, skein-dyed Solutia Ultron yarn. Available in 13 neutral colors, Fabrique is a nondirectional pattern that does not feature the linear or geometric details typical of wovens. Karastan Contract, Kennesaw, Ga. www.karastancontract.com

CIRCLE 220

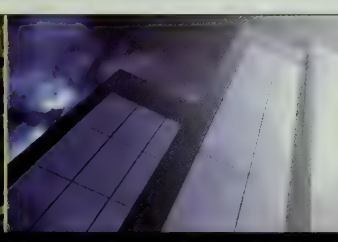


◄ Recreating the comforts of home

BioTec is a new floor covering from Mannington Commercial that features a soft surface and a resilient base structure to enhance the homelike comfort and aesthetics of health-care facilities. The products are composed of Invista type 6,6 nylon treated on the face with ColorSafe bleach-resistant technology, and on both the face and back with MCare antimicrobial technology. Mannington Commercial, Calhoun, Ga. www.mannington.com CIRCLE 221

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.





AXIUM
It's About Time

a -- Accounting and ness Management tion for Your A/E Firm

, designed for flexibility and of use, is the most powerful ffordable accounting and ess management solution fically for A/E firms. Ajera s you to customize tasks, ts, and invoices to increase ct profitability, maximize flow, and empower the ss of your firm.

or more information ct Axium at 800.872.1540 r sales@axiumae.com

What empowers your firm's success?

Increasing Project Profitability
Ajera's "at-a-glance" Dashboard consolidates critical project information on your desktop in real time to keep projects on track and profitable.

Maximizing Cash Flow
Ajera's integrated environment unites time entry, consultant tracking, billing management, and easily customized invoicing to help you get bills out and cash in -- faster.

Better Business Management
Ajera provides the customized, industry specific reports and trending information to help you make the best decisions for your firm.

Ajera's complete accounting and business management solution.

Sign up for a FREE Internet Presentation at www.axiumae.com and realize the benefits Ajera can provide your firm!

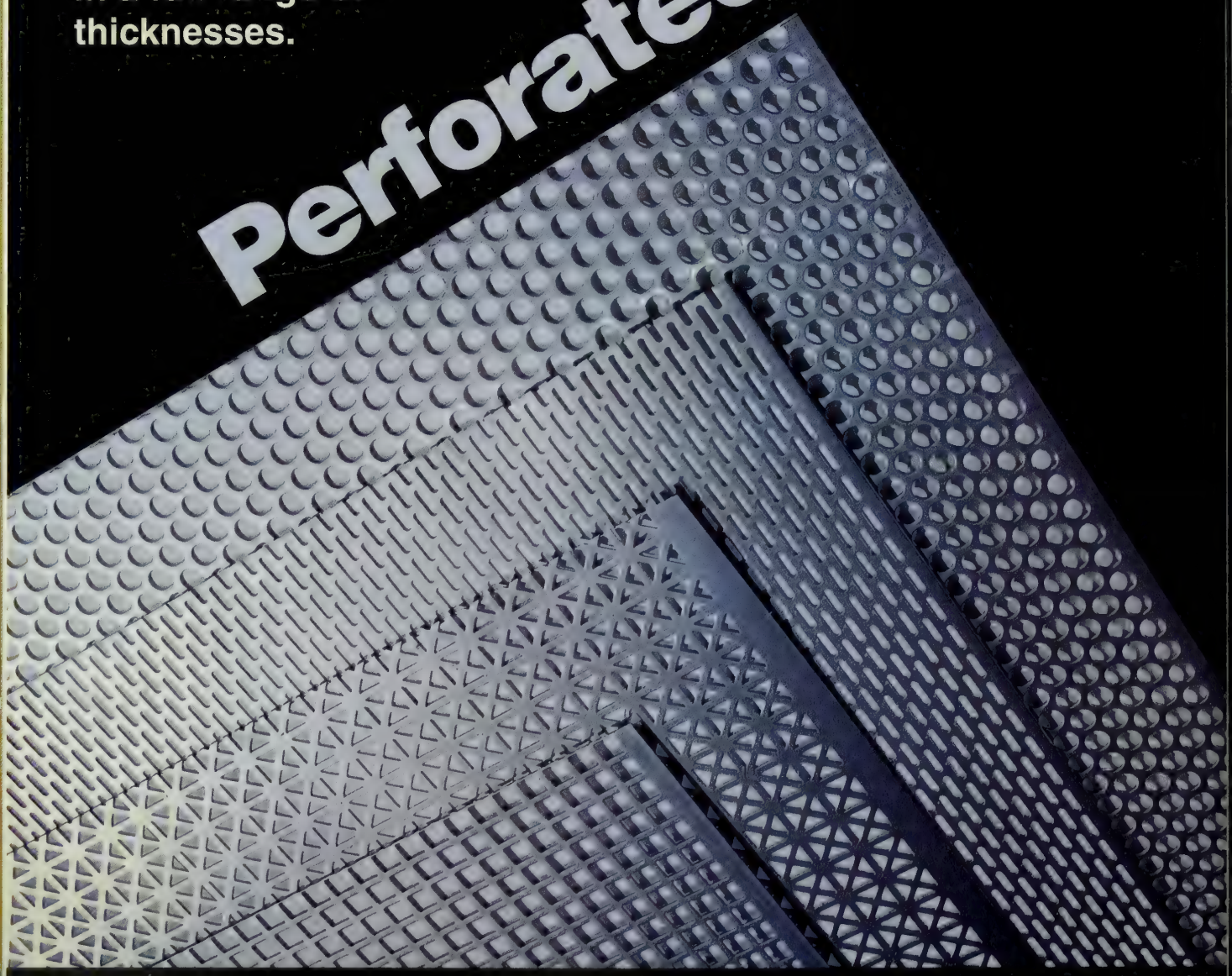
CIRCLE 301 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ESP

Energy Steel Products

Stocked in Stainless, Galvanized, Aluminum, Cold Rolled and HRPO, in a full range of thicknesses.

Perforated Metals



Toll Free: 1-888-377-4317 www.energysteelproducts.com

E-mail: houston@energysteelproducts.com

CIRCLE 302 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS.

Product Briefs

▼ New modern lever from the firm of a late modern master

The new H351 door lever, part of Valli & Valli's Fusital collection, was designed by Philip Johnson/Alan Ritchie Architects, the firm of the late Philip Johnson. Crafted in brass and available in satin-chrome, chrome, and brass finishes, the lever features a clean, contemporary design, rising from a circular rosette into a solid handle and tip highlighted by 10 squared-off grooves. The collection also includes window handles, pull handles and knobs, coat hooks, bathroom privacy sets, escutcheons, and a door key. Valli & Valli, New York City. www.vallievalli.com **CIRCLE 222**





▲► Leather wall and floor tiles

Blackstock Leather has supplied leather floor and wall tiles to the design industry since 1991. Crafted from natural full-grain cowhide, the tiles can be used in bedrooms, libraries, dens, and hallways, as well as for commercial applications, including offices, conference centers, museums, showrooms, and theaters. The company has developed a magnetic installation system for its tiles that allows the owner to reconfigure the pattern or take it to a new location. The tiles, which develop a patina over time, have a flexible magnetic backing and are installed onto a steel substrate that is supplied by Blackstock. The substrate is painted black on one side and comes in 23¾"-square sheets. Other benefits of the system include a fast and easy installation process and easier maintenance. Blackstock Leather, Ontario, Canada. www.blackstockleather.com **CIRCLE 224**





◄▼ Ceramic and glass tile

Mizu (left) is a new family of ceramic tiles from Walker Zanger inspired by classic Japanese stoneware. Featuring deep crackle glazes that create the effect of pooling water, Mizu's color line ranges from golden browns to greens to bright blues. Weave is Walker Zanger's latest collection of iridescent glass mosaics. It is available in four patterns—Offset, Montage, Basketweave, and Straight—in muted tones of autumn gold, pearl, amber, sandstone, sea green, ocean blue, and metallic pewter, among others. Walker Zanger, Sylmar, Calif. www.walkerzanger.com **CIRCLE 223**



▼ Citterio-designed table/storage system

Ad One Office is a modular system of tables, storage components, and accessories designed by Antonio Citterio. Optional storage cabinets are placed at table edges while net-fabric screens slip between tables to visually separate workers and provide a sense of enclosure. Cables, fed from the floor through a flexible plastic chain and a work-surface outlet flap, allow for easy access to data, telephone, and power sources. The soft, light color of the table's hard elements may be accented with color provided by the soft mesh fabric in orange, green, yellow, gray, or white, specified on cabinet backs, as freestanding screens, or central table screens. Vitra, New York City. www.vitra.com **CIRCLE 225**



CHICAGO
ARCHITECTURE
FOUNDATION

Thanks to the American Institute of Architects for recognizing...

- *Schoolyards to Skylines* architecture and built environment K–8 curriculum with the AIA 2005 Institute Honors for Collaborative Achievement
- CAF President and CEO Lynn Osmond as a 2005 Honorary Member of the AIA
- CitySpace Gallery with a Design Excellence Award by AIA Chicago

EDUCATION



Schoolyards to Skylines
K–8 Architecture Curriculum
2005 Institute Honors for Collaborative Achievement

"It's the tool many teachers, architects, and AIA chapters have been searching for to make architecture come alive for young people."
—*2005 Institute Honors jury statement*

EXHIBITIONS

Newhouse Architecture Competition
for Chicago Public High School Students
May 25–June 9, 2005

Five Architects
Midwest projects by Julie Snow, Studio Gang, Zaha Hadid, and others
June 23–November 20, 2005

TOURS

Farnsworth House PLUS
En route to the Farnsworth, visit Mies masterpieces such as Crown Hall and 860–880 North Lake Shore Drive

Millennium Park
Tour Chicago's new front yard, including Frank Gehry's Pritzker Pavilion and Anish Kapoor's *Cloud Gate*

And more than 80 other tours with 7800 departures 362 days a year

CHICAGO ARCHITECTURE FOUNDATION
224 South Michigan Avenue
Chicago, IL 60604
312.922.3432

WWW.ARCHITECTURE.ORG

CIRCLE 303 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs

► Fabric-inspired tile



Taffeta field tiles, from UltraGlas, incorporate a subtle cross-linear texture that echoes the look and feel of taffeta fabric and lets the tiles emit a radiant inner glow. The tiles come in 31 standard colors, and custom matched colors may be specified. The line is available in standard field sizes at a 5/16" thickness, but it may be specified in greater thicknesses and larger sizes for slab-type installations. The completely lead-free tiles coordinate with an extensive line of UltraGlasTile decos, liners, and corners. UltraGlas, Chatsworth, Calif. www.ultraglas.com

CIRCLE 226

◄ Revving up a classic design



When a 1951 Emeco chair built for U.S. government hospitals was discovered for sale on eBay, the Hanover, Pennsylvania–based chair company decided to produce an updated edition of the chair for today's market. Designed by Adrian van Hooydonk and BMW DesignworksUSA, the 1951 chair debuted at last month's Milan Furniture Fair. Joining award-winning chair designs by Philippe Starck and Frank Gehry, 1951 features a brushed-aluminum frame that supports a generous ABS plastic seat and back available in five standard colors. It stacks six-high and is offered with a matching bar and counter stool. Emeco, Hanover, Pa. www.emeco.net

CIRCLE 227

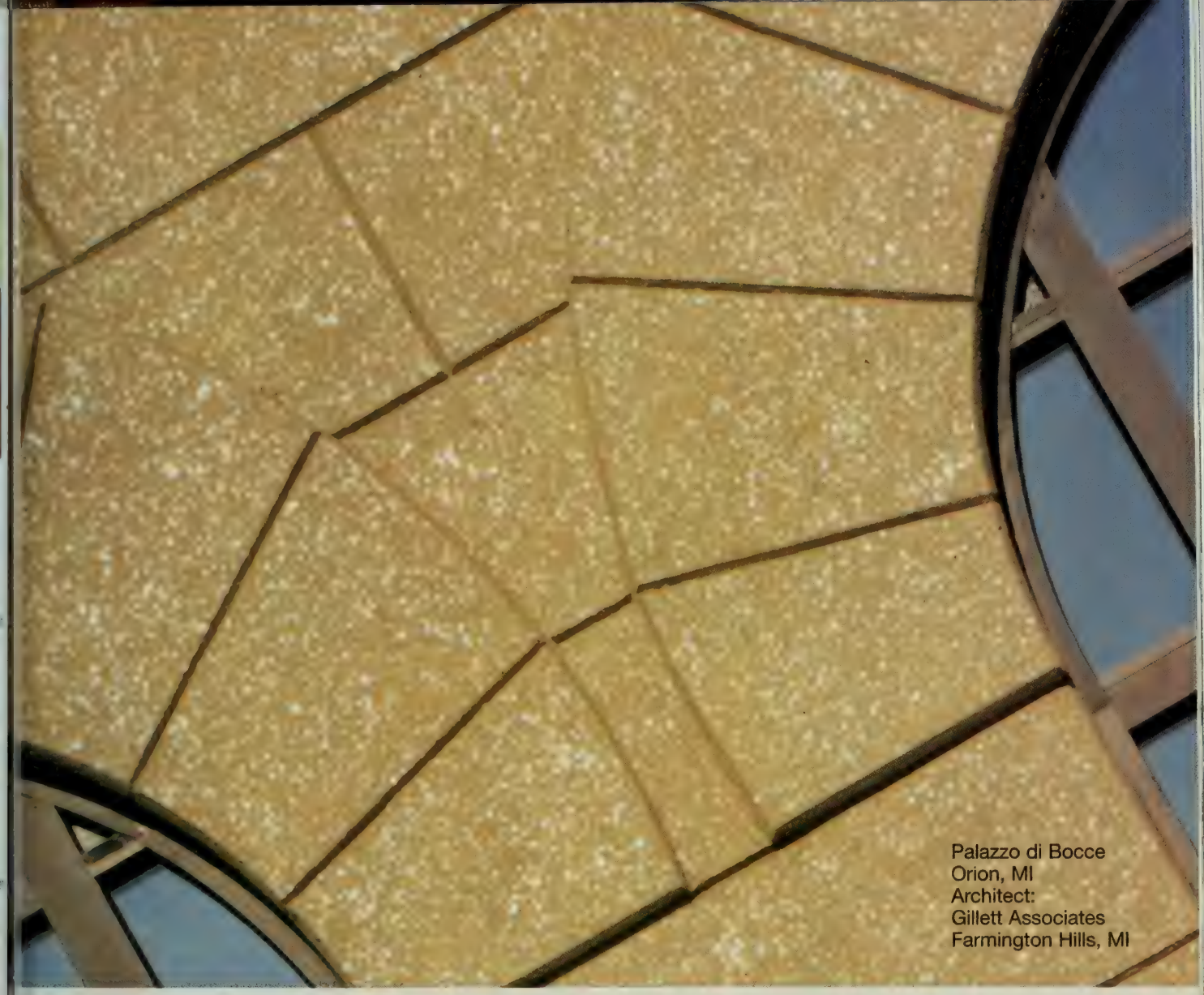
▼ Stonelike lavatory

The Pure Stone lavatory from Villeroy & Boch features a sculpted porcelain basin with an organic form that gives the illusion it has been carved from stone. The vessel style is offered in two sizes: 21⅛" or 23⅝". Three color options are available, including White; the brilliant surface of Star White; or the matte surface of Edelweiss. The Star White features *activecare*, Villeroy & Boch's proprietary ceramic glaze that yields a bacteria-resistant, hygienic finish. Any of the three options can also benefit from the addition of *ceramicplus*, the dirt-repellent surface finish that eliminates the need for harsh or abrasive cleansers. Villeroy & Boch, Monroe Township, N.J. www.villeroy-boch.com



CIRCLE 228

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



Palazzo di Bocce
Orion, MI
Architect:
Gillett Associates
Farmington Hills, MI

Take it for granite.™

You've never seen Dryvit look like this before. Cut stone? Granite? No, it's TerraNeo®. Rediscover Dryvit. Create exterior designs you've only dreamed possible. Call 1-800-4DRYVIT to request a sample today.

Call to learn more about other premium finishes and how to earn AIA/CES credits, too!

dryvit®

An RPM Company

100% ACRYLIC POLYMERS

© Dryvit Systems, Inc., 2004

www.dryvit.com

What do you want to design today?

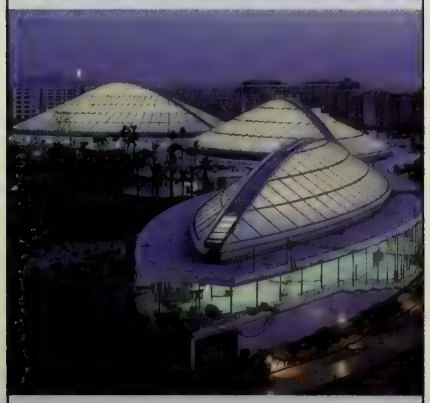
CIRCLE 304 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CPI
INTERNATIONAL
Quality Comes to Light™

World Class Leader in Translucent Skylights







Phone (800) 759-6985
www.cpidaylighting.com

CIRCLE 305 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

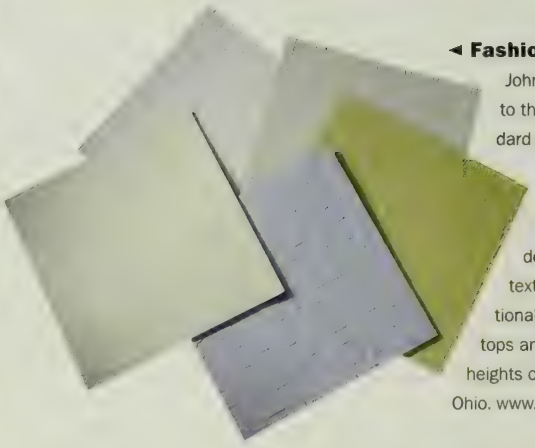
Product Briefs

▼ Furniture fair previews

imm Cologne 2005, held last January in Cologne, Germany, showcased 1,329 suppliers from 48 countries presenting the latest in furniture design. A precursor to April's Milan Furniture Fair, several new products were previewed at the show, including the Boing soft washbasin (below) made of flexible polyurethane foam from Portuguese manufacturer Puntmobles, and the Tag'liatelli chair (below right) from Belgian manufacturer Quinze & Milan, which resembles sticky strands of brightly colored pasta wrapped around a bean bag. imm Cologne, Cologne, Germany. www.koelnmesse.com **CIRCLE 229**







◄ Fashion-forward flooring textures

Johnsonite has introduced five additional textures to the company's current six textures and standard 60-color rubber flooring line. The textures include the delicate lines of Bamboo; the nondirectional look of Chopped Bamboo; Pebbles, featuring granual stones that randomly align to create a subtle, workable texture; Artistic Square, a variation of the traditional square pattern through the use of textured tops and grout lines; and Cubis, featuring various heights of lineal squares. Johnsonite, Chagrin Falls, Ohio. www.johnsonite.com **CIRCLE 230**

► Customizable and curved panels

Zero Systems, the Italian line of modular systems for retail, work, and exhibition environments, is now customizable with logos and graphics that can help users maximize the visual impact of their installations. Using a direct ink-jet printing technique, nearly any image in any combination of colors can be printed onto Zero System curved or straight aluminum panels. In addition, larger radius curved panels have been added to the collection, allowing for the creation of mobile meeting rooms. Zero U.S., Lincoln, R.I. www.zerous.com **CIRCLE 231**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

EXTRAORDINARY.
ANY WAY YOU SLICE IT.







Natural rock cut thin. Exquisite brick cut thin.
Made beautiful by Robinson Brick Company.

ROBINSON BRICK COMPANY
SINCE 1886

800-477-9002 RobinsonBrick.com/Record

CIRCLE 306 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Custom Entrances

GOVERNMENT



Superior Courthouse, Hartford, Connecticut Architect: The Malmfeldt Associates

EDUCATIONAL



Tufts Dental School, Denver, Colorado Architect: Perry, Dean & Associates

COMMERICAL



Tiffany's, Beverly Hills, California Architect: Berman & Bernolini

RESTORATION



Temple Emanuel, New York, NY Architect: Dan Barteluce PC/ Architects

DAWSON DOORS

Since 1946

BALANCED · SWING · SLIDING · METAL CRAFT

AIA booth #3621

visit us at www.dawsondoors.com

716.664.3811

CIRCLE 307 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs

▼ The kitchen as a canvas

German kitchen manufacturer Alno has introduced Picture Line, a patented, graphic process that allows a single cabinet or the entire kitchen to act as a canvas. The new technology prints directly onto the doors of kitchen components from more than 150 stock images and graphics, as well as from personal photos or images provided by the consumer. Due to the relatively low cost of the process, the doors can be easily changed with new images from time to time, giving the kitchen an updated look without the cost of new installions. Alno USA, Boston, Mass. www.alno.com **CIRCLE 232**



► Protective cover

BlastGard material effectively mitigates the explosive effects of a bomb or other fire-related disasters by reducing the blast effect, extinguishing the fireball, and capturing the deadly fragmentation. The company's BlastWrap solution is being marketed to an array of industries, including aviation, construction, and the military. The FR911 First Responder solution allows police, fire, and military personnel to quickly and safely cover a bomb and clear civilians from the area, while protecting themselves and property. BlastGard, Clearwater, Fla. www.blastgard.net **CIRCLE 233**

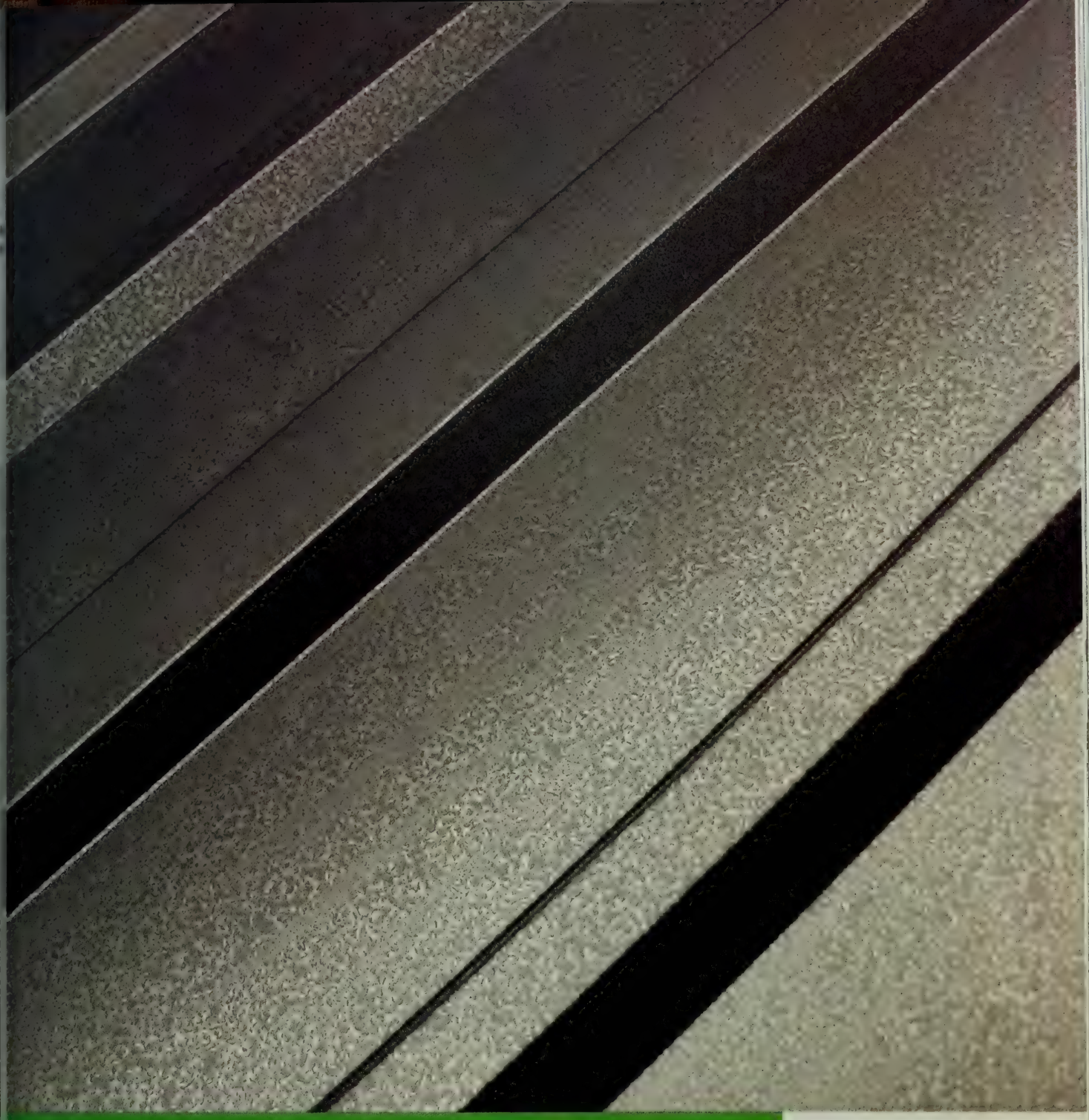




◄ Improved fire-rated drywall

Temple-Inland has introduced a new, improved Type TG-C formula for its fire-rated gypsum wallboard. While offering the same finishing and performance properties as its full line of wallboard products, Temple-Inland's new premium TG-C wallboard is UL approved for almost twice as many applications. Manufactured in ½" and ⅝" thicknesses, a 4" width, and lengths from 8' to 14', the product also features traditional tapered edges. Temple-Inland, Tyler, Texas. www.templeinland.com **CIRCLE 234**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



Vintage™ - Introducing a family of Steelscape TruZinc® Hot Dip Galvanized steel products for architectural applications which exhibit an as-manufactured aged appearance. Vintage™ I is intended for non-warranted applications where "natural aging" will occur after an initial period of time. Vintage™ II & III were developed for "higher-end" applications where a appearance warranty is required. Please contact a Steelscape representative for product information, availability and warranty details. 1.888.285.7717 www.steelscape.com

steelscape

Great people behind great steel.

CIRCLE 308 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS.

Product Briefs

▼ Biometric access control

Marks USA introduces its IQue biometric fingerprint lockset. The combination of the stand-alone IQue lockset with a biometric fingerprint reader with RF (radio frequency) transmission offers security access that can't be lost, stolen, or duplicated to verify a person's identity. Use of RF transmission also allows for an installation that will not compromise the fire rating of the door system. The IQue biometric fingerprint lockset allows up to 90 users and a 1,000 event audit trail, as well as easy installation and secure wireless transmission to the lock. Marks USA, Amityville, N.Y.



www.marksusa.com

CIRCLE 235



▲ Modern German glass partitions

Sprinz manufactures and markets glass products for interior design and architecture, including swimming pool and wellness applications. The company's ceramic-screen-printing process (above left) is offered as a rugged and versatile alternative to sandblasted or etched glass. Together with designer Matteo Thun, Sprinz has created a partition wall system (right) for wellness and sanitary applications. The "Basic" model is produced from .39"-thick toughened safety glass, while the "Modern" model has high-gloss chrome mirror glass on the inside and matte chrome with a screen-printed finish on the outside. Both models can be used to produce partition walls, individual cubicles, and rows of cubicles. Sprinz, Ravensburg, Germany. www.glas-sprinz.de **CIRCLE 236**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

HIGH SECURITY BIKE STORAGE



Custom perforated patterns on the doors and sides provide an attractive design element that enhances security. Seeing what's inside the locker ensures that they are used *for bike storage only.*

Huntco offers a variety of all-steel bike lockers that now feature *on-demand, keyless bike storage*, utilizing cell phone technology, that assures complete security. Optional bike lock, padlock or key locking systems are available.

www.huntco.com
1.800.547.5909

Huntco
SITE FURNISHINGS

TRADITION. INNOVATION. SECURITY.

CIRCLE 309 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Passport to *Inspiration*







Hirofumi Sugimoto, a noted Japanese architect, has been using engineered wood products in his innovative designs for more than ten years. The Okutsu Hot Springs complex combines Sugimoto's vision with the versatility of glued laminated timbers in a variety of buildings in the resort. In Japan and in the U.S., glulam delivers architectural design that soars, strength and dependable performance, and finished structures infused with the warm character of wood.

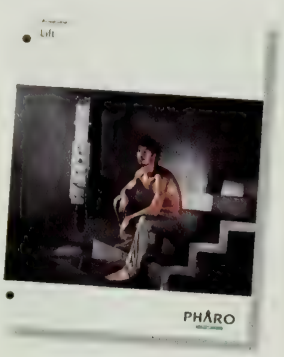
Find your inspiration at:

www.**glulambeams.org**

CIRCLE 310 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ENGINEERED WOOD SYSTEMS
APA EWS

Product Literature









For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Shower-panel brochure

A new, 10-page, full-color brochure showcases the Pharo Showerpanel Lift from Hansgrohe. Inside are numerous color photographs of the shower panel as well as line drawings and charts that feature descriptions and dimensional data. Hansgrohe, Alpharetta, Ga. www.hansgrohe-usa.com **CIRCLE 237**

Lighting inventions

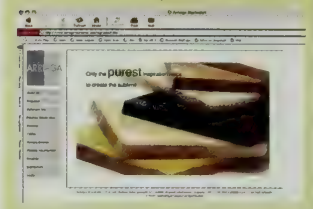
Nova Lighting has introduced a 36-page catalog featuring color images and information on many of its new designs, including a wide variety of Arc Lamps, a lighting category Nova invented years ago for the American market. Nova Lighting, Huntington Park, Calif. www.novalamps.com **CIRCLE 238**

Garden design catalog

Arcadian Garden Features' expanded 40-page catalog is the most comprehensive one ever produced by the company. It details the entire range of Arcadian garden design products, from pebble pools and self-contained fountains to garden furniture, ornaments, and paving. Haddonstone, Bellmawr, N.J. www.arcadian.biz **CIRCLE 239**

NEW SITES FOR CYBERSURFING

Site for Spanish stone architectural elements, tiles, and slabs is available in Spanish, French, English, and German.



www.arriaga-marmoles.com

At Designtex's new site, visitors can learn about upholstery, wall coverings, drapery, panel fabrics, and other new offerings from the company. **www.dtex.com**

Online tool allows radiant-floor customers to draw/submit plans electronically for a price quote. **www.warmlyyours.com**

Restoration mortar brochure

Cathedral Stone Products has produced a new eight-page color brochure detailing information on the entire line of Jahn Restoration Mortars. Each Jahn mortar formulation has been engineered for use with specific substrates such as sandstone, limestone, terra-cotta, stucco, concrete, marble, and brick. Cathedral Stone Products, Hanover, Md. www.cathedralstone.com **CIRCLE 240**

What are Architects earning?

What are firms paying?





FIND THE ANSWERS in the new **AIA Compensation Report**—the most comprehensive source of compensation information in the architecture industry. No other survey covers such a wide range of positions and geographic scope. You'll find up-to-date information on compensation levels and benefits for over 35 positions inside architecture firms.

The survey is available in print or electronic PDF. In PDF, you can also buy any of the regional tables, which include states and metro data for each region.

AVAILABLE SUMMER 2005



AIA

2005 AIA Compensation Report: A Survey of U.S. Architecture Firms

For updated information, please visit **www.aia.org/economics.**

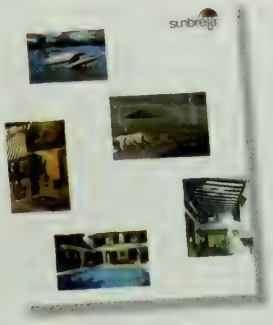
AIA BOOKSTORE | 1735 NEW YORK AVENUE, NW | WASHINGTON, DC 20006

Product Literature









For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Molded-millwork catalog

Fypon has introduced a new product catalog featuring 750 new pieces, including 76 louvers, 52 window crossheads, 46 window-crosshead arches, 105 decorative brackets, 66 dentil blocks, 39 ceiling medallions, and 154 profiles of molding options, bringing the full line to more than 6,000 items. Fypon, Archbold, Ohio. www.fypon.com **CIRCLE 241**

Cabinetry design brochure

The new *Marqué II* style guide from Quality Custom Cabinetry presents 15 pages of custom cabinetry design options. More than 60 photos depict cabinetry styles, wood species, and painted and stained finishes. Vignette photos include kitchen, bath, and custom living areas. Also shown are some of the available storage solutions, intricate detail options, and architectural elements. Quality Custom Cabinetry, New Holland, Pa. www.qcc.com **CIRCLE 242**

Conservation education

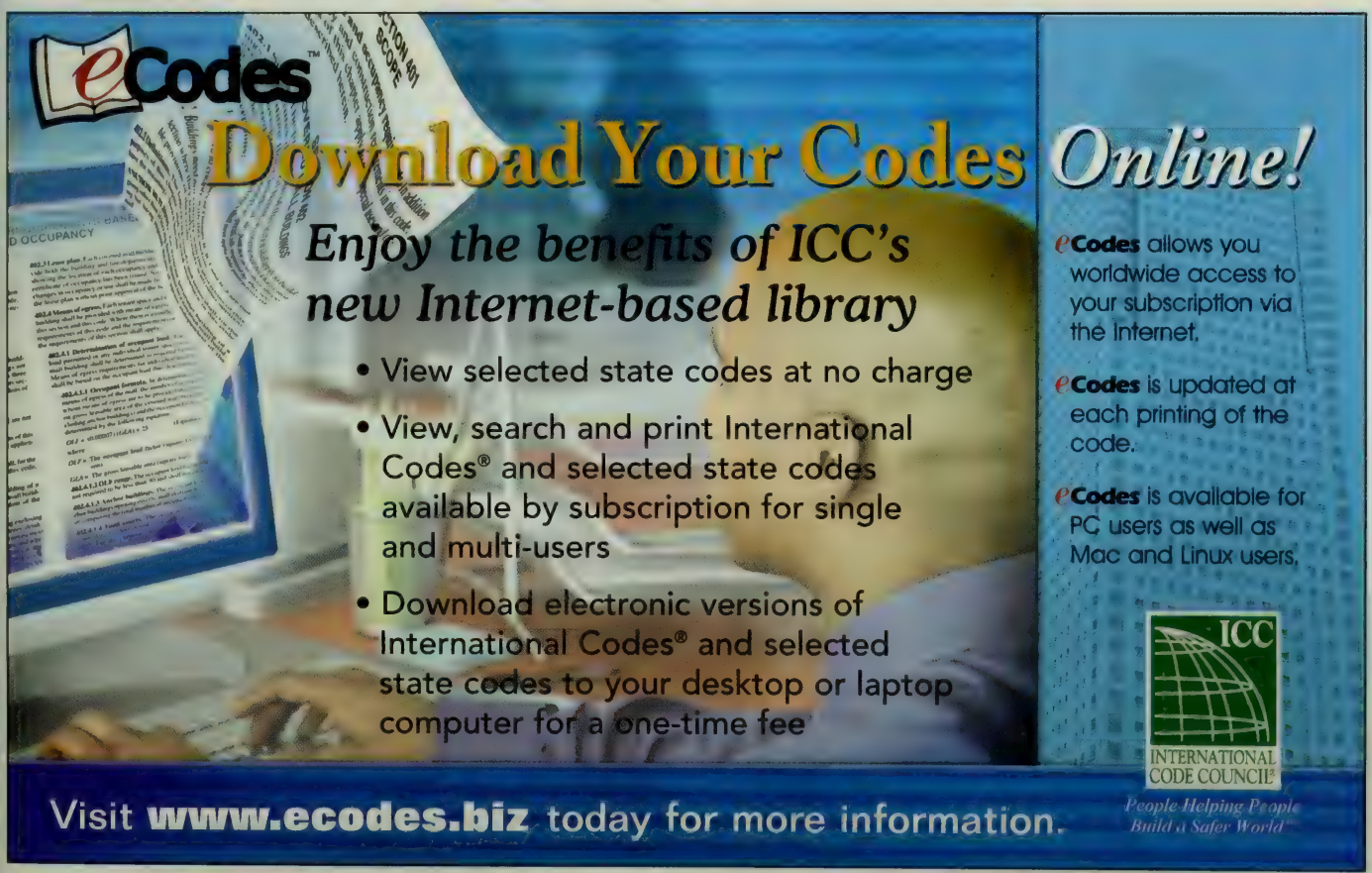
Sloan Valve explains how educational facilities can conserve water and reduce operating costs in the new brochure *How Green is Your School's Plumbing?* The brochure highlights Sloan's full line of water conservation plumbing systems, including its sensor faucets, Flushometers, and Waterfree Urinals, which are suitable for all types of school facilities. Sloan Valve, Franklin Park, Ill. www.sloanvalve.com **CIRCLE 243**

Leather sample card

Harden Contract now offers a new *Leather Collection Sample Card*. The four-page, portfolio-style brochure presents generous 1½"-square swatches of Harden's own collection of standard and premium American leather for seating upholstery and top inserts on desks, tables, credenzas, and other case goods. Harden Contract, McConnellsville, New York. www.hardencontract.com **CIRCLE 244**

Awning fabric folder

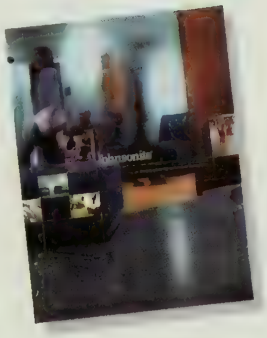
The new *Color Folder* from Glen Raven Custom Fabrics showcases the full line of Sunbrella-brand awning fabrics, including several new additions this season. Glen Raven Custom Fabrics, Glen Raven, N.C. www.sunbrella.com **CIRCLE 245**



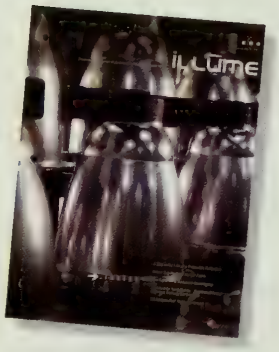
CIRCLE 311 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Literature









Sheet and film for signage

Sheffield Plastics has released an eight-page color brochure describing its full line of polycarbonate sheet and film products for tough outdoor sign applications. Sheffield's Makrolon signage products are produced exclusively with Makrolon polycarbonate resin from Bayer Corporation. A detailed chart delineates the physical, optical, mechanical, thermal, and flammability properties of Makrolon, and another chart details available sizes, colors, and surface textures. Sheffield Plastics, Sheffield, Mass. www.sheffieldplastics.com **CIRCLE 246**

Lighting magazine

Prescolite has announced the newest issue of *illume*, the company's magazine of architectural lighting ideas and applications. Prescolite premiered the magazine in 2001 as a full-scale periodical for the commercial lighting specifications industry. The 32-page journal includes pullout inserts for placement in Prescolite's spec binders. Hubbell Lighting, Spartanburg, S.C. www.prescolite.com **CIRCLE 247**

Specialty flooring catalog

Johnsonite has released an updated version of the *Johnsonite Story*, a full catalog of the company's product offerings. The catalog helps define high-performance environments, explains flooring's ability to play a role in these environments, and details the benefits of each Johnsonite product solution. The Johnsonite specialty flooring line ranges from rubber flooring and stair-well solutions to wall base collections and finishing accessories. Johnsonite, Chagrin Falls, Ohio. www.johnsonite.com **CIRCLE 248**

Architectural grilles/screens

The Airolite Company offers a four-page brochure detailing its line of architectural grilles and screens. Airolite custom designs its grilles and screens to function as architectural accents or entire facades. The new brochure features a grille specification guide and detailed drawings of several grille designs. Airolite, Marietta, Ohio. www.airolite.com **CIRCLE 249**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Maximum VALUE through Superior SERVICE



AVOID BACK INJURIES

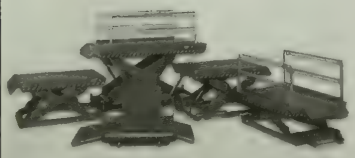
EVERY DOCK NEEDS A LIFT

An Advance dock lift is the only equipment that can service all trucks. Full line of dock lifts including:

- Portable
- Top Of Ground
- Pit Mounted



INCREASE PRODUCTIVITY



DOCK LIFTS

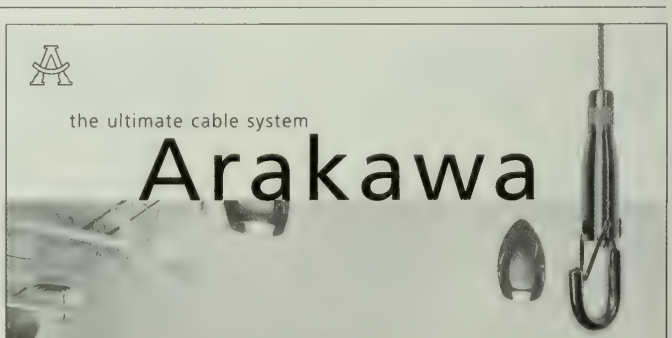
Call 1-800-THE-DOCK or visit our web site www.advancelifts.com for a FREE CATALOG.

ADVANCE LIFTS

CIRCLE 312 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

the ultimate cable system

Arakawa

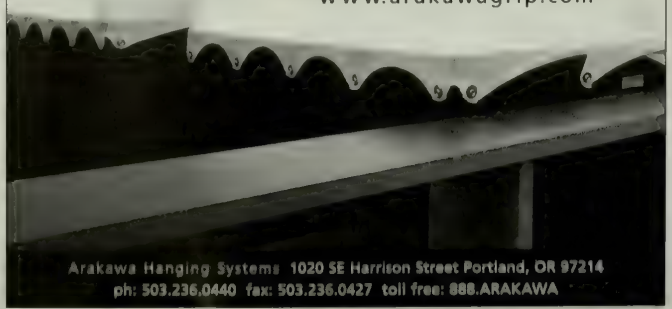


Arakawa Hanging Systems supplies quick-release cable grippers for hanging nearly anything, from fabric to metal.

With the Arakawa Hanging System, your displays are secure and locked in place, but quickly adjustable with the touch of a button. The mechanical grip fastens to the cable, eliminating set screws and damaged cable.

Visit us today.

www.arakawagrip.com



Arakawa Hanging Systems 1020 SE Harrison Street Portland, OR 97214
ph: 503.236.0440 fax: 503.236.0427 toll free: 888.ARAKAWA

CIRCLE 313 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

2005 Architectural Precast Association

EXCELLENCE

WARDS FOR DESIGN & MANUFACTURING

e 2005 Architectural Precast Association Awards for sign and Manufacturing Excellence is a national award ogram that is sponsored by the Architectural Precast sociation. Each year a jury of your peers select the best signs utilizing architectural precast concrete. Finished structures must display a highly animated use of precast which gives life and vitality to the building surface. Other considerations include a good control of medium, consistent color and textural control, and a design that exploits the potential of an architectural precast system.



U.S. Patent & Trade Office Headquarters
Alexandria, VA

DESIGN
SOM
Washington, D.C.

MANUFACTURING
Arban & Carosi, Inc.
Woodbridge, VA



400 Massachusetts Ave. N.W.
Washington, D.C.

DESIGN
Esocoff and Associates
Washington, D.C.

MANUFACTURING
Arban Precast Stone, Ltd.
Dumfries, VA



Residences at Amory Park
Boston, Massachusetts

DESIGN
The Architectural Team, Inc.
Chelsea, MA

MANUFACTURING
Northern Design Precast Inc.
Loudon, N. H.



University Chapel
Fordham University
Bronx, New York

DESIGN
Aldo Divitto
Bronx, New York

MANUFACTURING
THR Cast Stone & GFRC
Brooklyn, New York

2005 JURY MEMBERS

Jury Chairman
David Mohney, AIA
Dean of the College of Design at the University of Kentucky, Lexington KY

Juror
Alan B. Sullivan, AIA
Principle-In-Charge of Healthcare—CMW, Inc.
Lexington, KY

Juror
Martha R. Tarrant, AIA
President of Ross-Tarrant Architects, Inc.
Lexington, Ky

APA
ARCHITECTURAL PRECAST ASSOCIATION

6710 Winkler Road, Suite 8 • Fort Myers, FL 33919 • Tel: (239) 454-6989 • Fax: (239) 454-6787
E-mail: info@archprecast.org • Website: www.archprecast.org
gn choices are infinite with Architectural Precast Concrete. When you demand quality & beauty, demand Architectural Precast Concrete.

CIRCLE 314 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

freedom of DESIGN



Frustrated by losing usable space to create enclosed elevator lobbies?

Regain your freedom to design the way you want to with a solution developed by an architect – the Smoke Guard® System.

Provide superior protection for building occupants by limiting vertical smoke migration via the elevator shafts and satisfy building code requirements without sacrificing the aesthetic goals of your design.

Now you have even more freedom – freedom to choose from three Smoke Guard® System models to satisfy your need to balance economics and design.

AIA Expo
booth
#2479

For more information visit
www.smokeguard.com
or call 800.574.0330

CIRCLE 315 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

SMOKE GUARD® *systems*

copywrite 2005 Smoke Guard® division of RectorSeal

Dates & Events

New & Upcoming Exhibitions

Ant Farm 1968–1978
Karlsruhe, Germany
May 1–July 15, 2005
This exhibition tracks the seminal underground architects through drawings, posters, mail art, and video. Organized by the Berkeley Art Museum, the show is at Zentrum fur Kunst und Mediaentechnologie and will move to the Architecture Gallery at Yale University, New Haven, September 15–December 12, 2005. Call 49 0 721/8100-1007 or visit www.zkm.de.

Chicago Bridge
Los Angeles
May 6–June 10, 2005
This exhibition focuses on the schematic design, elements of the design development, and construction of Frank O. Gehry's BP pedestrian bridge in Chicago's Millennium Park. At UCLA Department of Architecture and Urban Design Perloff Gallery. Call 310/267-4704 or visit www.aud.ucla.edu.

1945: Creativity in Crisis
Chicago
May 7, 2005–May 26, 2006
Consisting of approximately 100 architectural drawings, models, artifacts, furnishings, and photographs, this exhibition focuses on American architecture and design of the 1940s. In Gallery 227 at the Art Institute of Chicago. Call 312/443-3600 or visit www.artic.edu/aic.

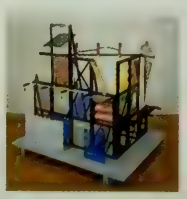
Scents of Purpose: Artists Interpret the Spice Box
San Francisco
May 8–September 5, 2005
More than 80 leading local and national artists and architects were invited to creatively explore the meaning and form of the traditional Jewish spice box (or *besamin*), used in the Sabbath prayer service. Participants in this art exhibition include renowned architects Daniel Libeskind, Chong Partners Architecture in association with Berkeley Mills & Earth Resources, Robert A.M. Stern, C. David Robinson, and Brad Cloepfil of Allied Works Architecture. At the Contemporary Jewish Museum. Call 415/334-8800 or visit www.cjm.org.

The Initiated Eye: Secrets, Symbols, Freemasonry, and the Architecture of Washington, D.C.
Washington, D.C.
May 18–December 31, 2005
An original exhibition focusing specifically on the interesting and significant contributions of Freemasons to the design and architecture of Washington, D.C. At the Octagon. Call 202/638-3221 or visit www.theoctagon.org.

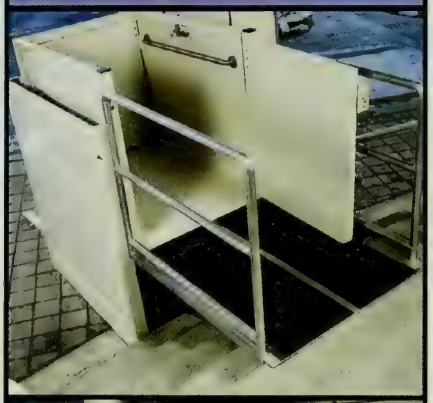
Annual Art and Structure Benefit Exhibition
New York City
May 19, 2005
This benefit challenges teams of artists and designers to create a structural work of art that responds to a charity-related theme. The theme, "Making Time," investigates the experience of a life not governed by the clock. All proceeds will benefit the Common Ground Community, a nonprofit housing and development organization committed to stamping out homelessness. For further information and tickets, call 212/471-0885.

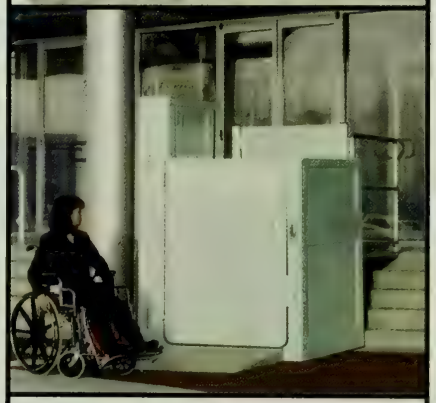
2005 Wright Plus Housewalk
Oak Park, Ill.
May 21, 2005
Visitors will explore one of the richest periods of American architecture by touring homes designed by Frank Lloyd Wright and renowned contemporaries. Located 15 minutes from downtown Chicago, Oak Park was home to Frank Lloyd Wright for 20 years and offers the world's largest concentration of Wright-designed structures. For more information, call 708/848-3440 or visit www.wrightplus.org.

Vanishing Point
Columbus, Ohio
May 21–August 14, 2005
This exhibition features photographs, paintings, drawings, video, and mixed-media installations that explore the aesthetics of contemporary urban "nonspaces." These ubiquitous public realms—convenience stores, hotel lobbies, shopping malls, airport terminals, parking lots—are often considered anonymous, banal, or otherwise socially and culturally insignificant.



Why put up with rust later when you can have an Inclinator?





Inclinator's SpectraLift® is the industry's only fiberglass wheelchair lift. With stainless steel mechanisms and gel coating finishes, it simply will not rust. And, the sleek design comes in 28 standard colors. Call us today to learn more.

INCLINATOR
COMPANY OF AMERICA

www.inclinator.com
800-343-9007 • DEPT. 66

RESIDENTIAL ELEVATORS
WHEELCHAIR LIFTS • DUMBWAITERS

CIRCLE 316 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Stunning Strength



Pawling Corporation Architectural Products Division

(800) 431-3456







Pro-Tek® impact protection stands up to wear, tear and stares. Specify wall guards, corner guards, handrails and vinyl sheet that protect and beautify. From the interior to the exterior, the basement to the lobby to the parking garage, we've got you covered.

www.pawling.com

PAWLING CORPORATION ARCHITECTURAL PRODUCTS DIVISION www.pawling.com

CIRCLE 317 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

Rather than objectively documenting these spaces, the artists in *Vanishing Point* interpret them by focusing on their experiential and atmospheric qualities. At the Belmont Building, Wexner Center for the Arts. Call 614/292-0330 or visit www.wexarts.org.

2nd International Architecture Biennale Rotterdam: The Flood
Rotterdam, the Netherlands
May 26–June 26, 2005
With the exhibitions *The Water City*, *Mare Nostrum*, *Polders*, *Three Bays*, and *Flow*, the Biennale will spotlight the relation between water and architecture in the Netherlands and around the world. In addition, the Biennale will feature numerous conferences, lectures, excursions, a film program, and a city program. At Las Palmas and the Netherlands Architecture Institute. For further information, visit www.biennalerotterdam.nl.

Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation 1968–1975
New York City
June 10–September 10, 2005
In response to the lack of housing units being built for families of limited income, a concerned group of architects, planners, policy makers, public advocates, and environmental psychologists will take a look at the situation by presenting an evaluation of the housing produced by the New York State Urban Development Corporation. The exhibition will use plans and photographs of a sample of projects around New York State that demonstrate housing of differing types: urban and suburban; mixed income; high-rise and low-rise; varying densities; with various building materials and technologies. At the Center for Architecture. Visit www.udchousing.org.

Jewish Washington: Scrapbook of an American Community
Washington, D.C.
June 24, 2005–January 8, 2006
Scrapbooks, historical photographs, business ephemera, architectural artifacts, and other items convey the story of the local Jewish community as it grew along 7th Street into neighborhoods across the city. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

2005 Serpentine Gallery Pavilion Program
London
Summer 2005
Portuguese Pritzker Prize–winning architect Alvaro Siza and his long-time collaborator, the distinguished architect Eduardo Souto de Mouro, will design the next Serpentine Gallery Pavilion. Since the commission was launched in 2000, it has resulted in four landmark temporary structures. At the Serpentine Gallery. Call 020/7402-6075 or visit www.serpentinegallery.org.

Ongoing Exhibitions

Mexico City Dialogues: New Architectural Practices
New York City
Through May 7, 2005
The first international exhibition organized by the Center for Architecture, *Mexico City Dialogues* is part of mexicoNOW, a citywide festival celebrating contemporary Mexican culture. Jose Castillo, a Mexico City–based architect, educator, and associate editor of *Arquine* magazine, serves as guest curator of the exhibition. The exhibition examines the changing fabric of Mexico City through 17 selected projects by young Mexican architects. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

un/spoken (SPACES)
Charleston, S.C.
Through May 8, 2005
Eighteenth- and 19th-century paintings of Charleston not only reinforce the city's significance as a prominent colonial and antebellum metropolis, as well as tourist destination of today, but also present subtle and often not-so-subtle distinctions between class, wealth, and racial status. *un/spoken (SPACES): Inside and Outside the Boundaries of Class, Race, and Space* investigates the complex relationships between these variables. Ray Huff and Mario Gooden of Huff Gooden Architects in Charleston approach the Main Gallery of the Gibbes as a multidimensional landscape in which selected works from the permanent collection are recontextualized through a manipulation of spatial boundaries and interpretive texts. At the Gibbes Museum of Art. Call 843/722-2706 or visit www.gibbesmuseum.org.

Building the Future of Learning
Zurich
Through May 11, 2005
An exhibition of twelve projects for a learning cen-

HIGH ENERGY EFFICIENCY FOR YOUR CUSTOMERS. HIGH PRAISE FOR YOU.

ENGLERT ULTRA-COOL™ METAL ROOFING.

Now, one product seamlessly combines beauty, energy efficiency and accolades. Englert Ultra-Cool™ metal roofs are tested systems that offer all the profiles, finishes and textures you could want in standing seam. Each style comes in virtually unlimited panel lengths from eave to ridge, without end laps or splicing. And a concealed fastener system means the only thing you notice is the cool design. Best of all, every roof is backed by a 35-year warranty, and is Energy Star® and LEED® compliant. Englert Ultra-Cool Metal Roofing. Tops in efficiency, design – and referrals.



Images, Private residence by architect Hugh Newell Jacobson in Washington, DC.



ENGLERT™

Call 1-800-ENGLERT (364-5378) or visit www.englertinc.com for more information

CIRCLE 318 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

get
I ~~need~~
cabinetry
specs to
create great
designs.
at
kraftmaidspec.com



Only KraftMaidspec.com lets you download AutoCAD drawings of every single cabinet and gives detailed information on door styles, finishes, storage solutions and our quality construction. Visit KraftMaidspec.com and see why so many architects rely on it as their design resource.

Made just for you.
KraftMaid
Cabinetry

www.kraftmaidspec.com

CIRCLE 319 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

ter at EPF Lausanne. At the Swiss Federal Institute of Technology Zurich. Call 411/633-2963 or visit www.ausstellungen.gta.arch.ethz.ch.

Groundswell: Constructing the Contemporary Landscape
New York City
Through May 16, 2005
This exhibition presents 23 landscape design projects that reclaim and transform urban spaces—many derelict and in need of rehabilitation—into public parks and gardens. *Groundswell* features examples of the new artistic richness and critical debate in the design of public spaces, from small urban plazas to large parks for post-industrial sites to long-range plans for entire urban sectors. At the Museum of Modern Art. Call 212/708-9431 or visit www.moma.org.

Peter Eisenman: Barefoot on White-Hot Walls
Vienna
Through May 22, 2005
This show encompasses all aspects of Eisenman's oeuvre—Eisenman as architect, theoretician, writer, teacher—with emphasis on his most recent projects. At the MAK Exhibition Hall. Call 43-1/712-80 00 or visit www.MAK.at.

Dennis Oppenheim: Indoors, Outdoors
Bartlesville, Okla.
Through May 22, 2005
Known early in his career for his earthwork, kinetic, and conceptual art, the artist has recently turned to the relationship between sculpture and architecture. The exhibition brings together models for some 30 of his large-scale projects, along with design drawings and on-site photographs of completed works. At the Price Tower Arts Center, a tall mixed-use tower designed by Frank Lloyd Wright, which in itself is a masterpiece. Visit www.pricetower.org.

Josh Owen: big ideas/small packages
Philadelphia
Through May 27, 2005
In this exhibition, industrial and graphic designer Josh Owen will be showing newly designed products in a series of vignettes throughout 222gallery. The opening coincided with the launch of DesignPhiladelphia, a 17 day festival committed to advancing the public's awareness of design exploration and innovation in or about the city of Philadelphia. Visit www.designphiladelphia.org.

New York Now
New York City
Through May 28, 2005
A panoramic snapshot of the activity of New York architects at this moment, this exhibition showcases the scope and quality of the projects being created today by AIA New York Chapter members. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

Gunther Dominig: Structures That Fit My Nature
West Hollywood
Through June 26, 2005
This exhibition focuses on two key projects by the Austrian contemporary architect: the Steinways (Stone House), the architect's own home, still in process; and the prize-winning Nuremberg Documentation Center (Dokumentationszentrum), completed in 2001, which is a historical archive that transforms Albert Speer's Nazi coliseum into a memorial. At MAK Center at the Schindler House. Call 323/651-1510 or visit www.makcenter.org.



Carlos Garaicoa
Los Angeles
Through June 12, 2005
The first U.S. museum survey of recent work by Cuban artist Carlos Garaicoa, who addresses Cuba's politics and ideologies through the examination of Modern architecture. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

Constructing Stata: Photographs of Richard Sobol
Cambridge, Mass.
Through June 15, 2005
A collection of unpublished photographs captures the construction process that brought MIT and the world the Frank Gehry–designed Stata Center. Through the works of Boston-based photographer Richard Sobol, visitors experience up close how this building came together. At MIT Museum's Compton Gallery. Call 617/253-4444 or visit www.web.mit.edu/museum.

Changing Streetscapes: New Architecture and Open Space in Harlem
New York City
Through June 30, 2005

Dates & Events

This exhibition highlights recent construction and development in five areas: housing, commercial development, cultural and institutional projects, landscape, and planning. At the City College of New York (NAC Building). Call 212/650-7271 or visit www.ccny.cuny.edu/library/exhibits.html.

Blobjects & Beyond:
The New Fluidity in Design
San Jose, Calif.
Through July 10, 2005
Inspired by the idea that blobjects (blobby objects) have become defining products of the new millennium—often considered "cool looking" and compellingly curvaceous—the exhibition showcases the talents of some of today's hottest designers. A rich range of product, furniture, graphic, media, and architectural work from across the globe will be featured. At the San Jose Museum of Art. Call 408/294-2787 or visit www.SanJoseMuseumofArt.org.

The High Line
New York City
Through July 18, 2005
An exhibition of new High Line design work by the team of Field Operations and Diller Scofidio + Renfro. At the Museum of Modern Art. Visit www.thehighline.org.

Heather Allen: Architectural Textiles
Washington, D.C.
Through July 29, 2005
This exhibition features 30 of Allen's hand-woven and painted rugs and wall textiles. The architectural imagery represents Allen's exploration of interior space and emotional color. At the Octagon, the museum of the American Architectural Foundation. Call 202/638-3221 or visit www.theoctagon.org.

Chicago Architecture Foundation Tours
Chicago
Through March 2006
Led by trained volunteer docents, these acclaimed tours explore the architecture of the Chicago area via bus, boat, train, walking, or Segway. For descriptions of all tours, visit www.architecture.org/tours.

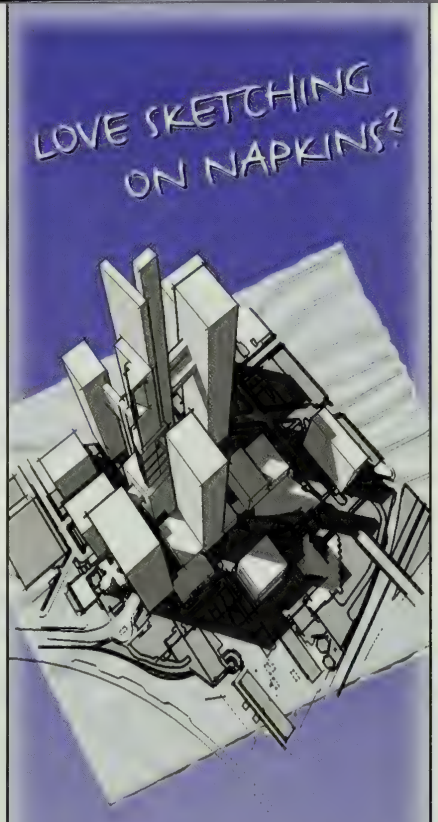
Worldview
Long-term
Worldview was started by the Architectural League in 2001 as a way of using the Web to create a forum for the presentation of new work in architecture and urbanism in cities around the world that are often overlooked in the mainstream architectural press. *Worldview: Oslo* is the third in an ongoing series of Web reports on architecture and urbanism in cities around the world. Other cities in the series are Dhaka and Caracas, all of which can be accessed at www.worldviewcities.org.

454 Projects for Paris 2012
Paris
Long-term
Fixed or mobile structures, inflatable architectures, monoliths, monumental sculptures, observation towers, scaffoldings, giant stairways, ramps and stairs, fluorescent ring compositions, stretched canvas towers, a diversion of cranes, a forest of urban periscopes: 454 projects from over 80 countries, for the realization of the Olympic Landmark in Paris will be on exhibition at the Pavillon de l'Arsenal, the center for information, documentation, and exhibition for urban planning and architecture of the City of Paris. Call 01 42-76-33-97 or visit www.pavillon-arsenal.com.

Washington: Symbol and City
Washington, D.C.
Long-term
This exhibition examines the nation's capital from its earliest city plans and sometimes haphazard development, to the origins of its distinctive monuments and the emergence of vibrant neighborhoods beyond the National Mall. Featuring large-scale touchable models of five of the capital city's architectural icons—the White House, the Capitol, the Washington Monument, and the Lincoln and Jefferson Memorials—the exhibition displays maps, drawings, artifacts, videos, and photographs. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lectures, Conferences, and Symposia

Symposium: Private "Public" Spaces—
A Stimulus for Urban Revitalization
Washington, D.C.
May 2, 2005
Privately developed open spaces such as plazas, atriums, and parks are underappreciated catalysts for urban revitalization. Jerold Kayden, a Harvard Graduate School of Design professor, will analyze the impact of such spaces, with an emphasis on New York City. He will join Andrew



SketchUp®

Award-winning!

SketchUp is a must-have 3D tool for busy architects. It's unique user interface allows for quick, easy 3D model creation, modification and presentation without a steep learning curve.

And... SketchUp works and plays well with CAD and multimedia applications!

Mac or Windows $495.

Download your FREE trial:
www.sketchup.com

CIRCLE 320 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

SUN VALLEY BRONZE









SVB

Innovators of Fine Solid Bronze Architectural Hardware

208.788.3631 tel • 208.788.1306 fax
www.svbronze.com

P.O. Box 3475 • Hailey, Idaho 83333

CIRCLE 321 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Altman, chief executive of the Anacostia Waterfront Corporation, to discuss other cities' experiences with privately financed public spaces. Paul Farmer, executive director and C.E.O. of the American Planning Association, will moderate the program. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Coverings 2005
Orlando
May 3–6, 2005
The most comprehensive tile and stone marketplace in the Americas, with more than 29,000 industry professionals from around the world expected to meet 1,000 exhibitors spotlighting new products, trends, materials, distribution, installation, and more. At the Orange County Convention Center. Call 703/683-8500 or visit www.coverings.com.

RAIC Festival of Architecture: Architecture, Art and Urban Design—Celebrating the City
Edmonton, Alberta
May 4–7, 2005
The festival is an annual event that takes place in a different Canadian city each year offering delegates a chance to exchange ideas and attend credited professional development courses, as well as listen to some of the professions' most forward thinkers. The Winspear Centre, City Hall, the Citadel Theatre, and the Shaw Conference Center will provide venues for lectures, exhibitions, and special events. Visit www.raicfestival2005.ca.

FreshForum2
Houston
May 4, 2005
FreshForum2 invites the public to view, party-style, a free exhibition of the Rice Design Alliance (RDA) Partners' recent work as emerging design professionals. In the gallery space of Intexture Architects. Visit www.rda.rice.edu.

Lecture: Christiane Crasemann Collins
New York City
May 5, 2005
Christiane Crasemann Collins is a historian of 20th-century and contemporary architecture and city planning, specializing in Central Europe and the Americas. She has lectured at academic institutions in the United States and abroad, and is author of *Werner Hegemann and the Search for Universal Urbanism* and coauthor of *Camillo Sitte: The Birth of Modern City Planning*. At the Bard Graduate Center. Call 212/501-3011 or visit www.bgc.bard.edu.

Sustainable Arkansas 2005: Rethinking Site, Water, Energy & Materials
Little Rock
May 5, 2005
A full-day conference and trade show featuring speaker Dr. David Suzuki, a world-renowned scientist and environmentalist with a mission to build a clean, competitive economy that does not threaten natural resources. Presented by the U.S. Green Building Council (USGBC) at the Statehouse Convention Center. Visit www.sustainablearkansas.com.

The Society for Marketing Professional Services (SMPS): Professional Development
New York City
May 6, 2005
Cosponsored with AIANY, this half-day workshop is entitled "Leads and Targets: Business Development Tactics to Help Your Firm Grow." At the Center for Architecture. Call 212/921-0061.

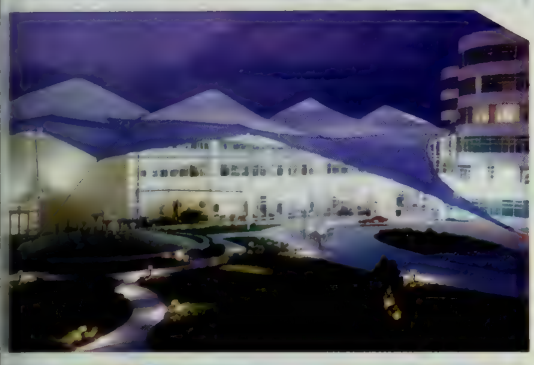
Lecture: SHoP/Sharples Holden Pasquarelli
Washington, D.C.
May 6, 2005
Founded in 1996, SHoP has become widely recognized for combining digital expertise, including three-dimensional form generation and rapid prototyping, with model building to arrive at original and buildable solutions. One of five principals, Greg Pasquarelli will discuss the firm's logic-based design strategies, which masterfully reconcile cutting-edge design with value engineering. The firm's projects include an academic building for New York's Fashion Institute of Technology, the master plan for the East River Waterfront Development, and several buildings in Mitchell Park on Long Island. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Brooklyn Designs 2005
Brooklyn
May 6–8, 2005
The show jury, which includes prominent designers as well as representatives from *Interior Design Magazine, Metropolitan Home*

Stretch your imagination.

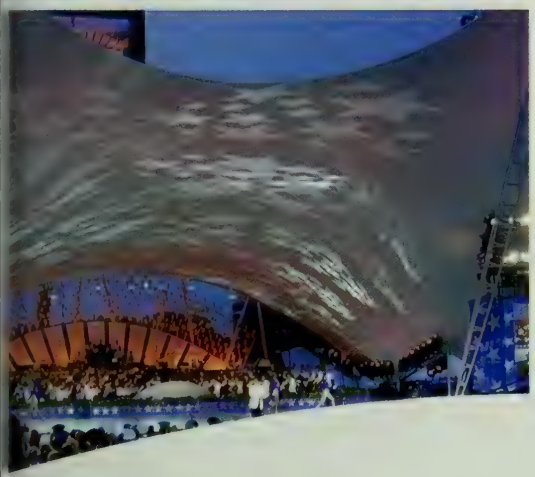
Tensioned membrane structures from Taiyo Birdair give your designs a whole new dimension.

















Taiyo Birdair has complete design/build resources for tensioned membrane and lightweight roofing systems.

Whether your vision is a world-class sports stadium, a stunning retail complex or an innovative museum concept, we can help you create tensile architecture, large and small, like no one has ever imagined.

We'll work with you and your clients to turn your ideas into a beautiful, strong, and long-lasting structure.

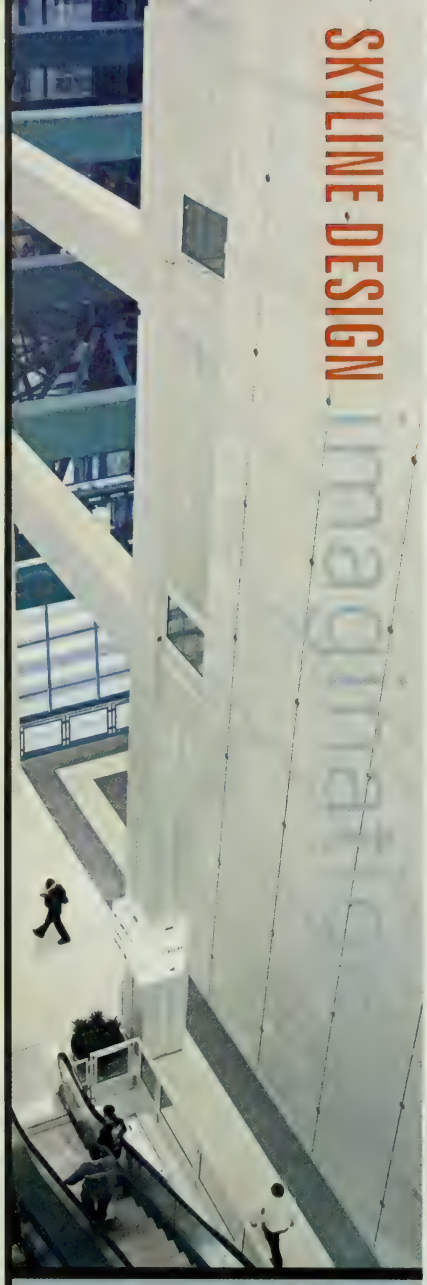
Contact us today for more information.

MakMax
maximizing membrane

Taiyo Birdair Corporation
800-315-4842 / 716-204-1234
Fax: 716-204-1236
Email: sales@taiyobirdair.com
www.taiyobirdair.com

Visit us at AIA National, Booth 3717

CIRCLE 322 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Vitrocolor ceramic coated glass

for interior and exterior wall cladding is offered in an infinite selection of hues. White clad walls are featured at Citicorp Center in Chicago.

www.skydesign.com

AIA BOOTH NUMBER 3418

SKYLINE DESIGN

ARCHITECTURAL ART GLASS

TEL: 888.278.4660

MADE IN CHICAGO

Architect: Perkins & Will Glazing: Trainor Glass

CIRCLE 323 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

Magazine, and *Furniture New York*, selected the best Brooklyn-based designers and manufacturers of contemporary furnishings. Brooklyn Designs has a unique appeal that draws trade and press contacts as well as a knowledgeable buying public. At St. Anne's Warehouse. Call 718/243-1414 or visit www.brooklyndesigns.net.



Cool Roofing ... Cutting Through the Glare
Atlanta
May 12–13, 2005
The Roof Consultants Institute Foundation (RCIF) presents a symposium focusing on evolving philosophies concerning the most effective methods to address "cool roofing." at the Hyatt Regency Hotel. Call 800/828-1902 or visit www.rci-online.org.

Retail Lighting Solutions
Peachtree City, Ga.
May 12–13, 2005
A two-day workshop to explore light from the designer's perspective and earn continuing education credit from Cooper Lighting's The Source, a leading lighting educational facility. Call 770/486-4680 or visit www.cooperlighting.com/education for further information on this or other workshops.

Malfatto: Imperfect Design for a Better World
New York City
May 13, 2005
This one-day symposium will explore a current cultural phenomenon: the movement of consumers away from the type of clean, supremely functional aesthetic that only industrialization could realize, toward unique, sensual objects that make explicit the human origins of their manufacture. During ICFF at Tishman Auditorium. Call 212/842-2047.

ICFF 2005
New York City
May 14–17, 2005
The International Contemporary Furniture Fair will be held at the Javits Convention Center. For further information, visit www.icff.com.

I Saloni Worldwide New York
New York City
May 14–17, 2005
I Saloni Worldwide New York will feature a wide range of furnishings of the most innovative contemporary designs produced by Italy's most important manufacturers. More than 60 exhibitors, 12,000 visitors, and 200 journalists are expected to attend. At New York's Show Piers (90 and 92). for information, visit www.isaloniworldwide.com.

Lecture: Thom Mayne
Los Angeles
May 16, 2005
Thom Mayne is principal of the firm Morphosis in Santa Monica and a professor in the UCLA Department of Architecture and Urban Design. A recipient of numerous awards, his current projects include the 2012 Olympic Village for New York City, San Francisco Federal Building, CALTRANS District Headquarters in Los Angeles, and the University of Cincinnati Student recreation Center. At UCLA Department of Architecture and Urban Design Perloff Hall. Call 310/267-4704 or visit www.aud.ucla.edu.

Lecture: Eisenmania
Vienna
May 17–19, 2005
These lectures are part of the supporting program for the exhibition *Peter Eisenman: Barefoot on White-Hot Walls*. Anthony Vidler, dean, School of Architecture, Cooper Union, New York, will cover the topic "What the Hell is a Diagram," and Andrew Benjamin, professor of Critical Theory in Design and Architecture at the University of Technology, Sydney, will discuss "Displaying Architecture: Eisenman's Exhibition." At MAK Lecture Hall. Call 431 711/36-248 or visit www.MAK.at.

Lecture: John Ronan
Chicago
May 18, 2005
As part of the Graham Foundation's "About Chicago" program series, local architect John Ronan will speak on the recent work of his practice, John Ronan Architects, whose projects range in scale from private residences to large public buildings. In a lecture entitled "Distillation," Ronan focuses on spatial and material investigations within a cultural climate of rapid change and considers aspects specific to the current building climate in Chicago. For information, call 312/787-4071 or visit ww.grahamfoundation.org.

IA Expo
ooth
023

explore
design
deliver

form·Z 5

3D form synthesizer

3D: Solids • NURBS • Surfaces
2D: Drafting
Photorealistic Rendering
Sketch Rendering
Animation
Information Management
Fabrication
Re-Engineering
... and so much more
in a cross platform
environment

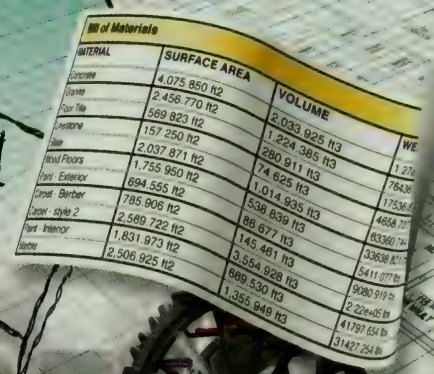


IMAGE CREDITS: "Dream House" by LJ Porter/Resolution 4 Architecture, New York, New York. www.re4a.com
"Martin Luther King Memorial" by Kevin A. Cespedes, Ocean D. Boston, Massachusetts. www.oceand.com
"Interior" by Robin Echevarria, Fort Worth, Texas. robineche@yahoo.com. "Design Factory" by James T. Bruck, Pygmy Studios Inc., Jackson, New Jersey. www.pygmystudios.com
"Rapid Prototype" by Morphosis, Santa Monica, California. www.morphosis.net. "Drafting Image" by Trey Wheeler, TWH Architects, Chattanooga, Tennessee. www.twharch.com

If you build it with form·Z

utodessys Inc
11 Riverside Drive
umbus, Ohio 43221
(614) 488-8838
ww.formz.com

ON READER SERVICE CARD OR GO
ORD.CONSTRUCTION.COM/PRODUCTS/





KINGSLEY-BATE
Elegant Outdoor Furniture in Solid Teak

For the dealer nearest you visit
www.kingsleybate.com
To the trade
t 703.361.7000 f 703.361.7001

CIRCLE 325 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

Twelve Years of Folding: Deleuze and the IT-Revolution in Architecture
Vienna
May 21, 2005
A body of writings by Peter Eisenman and the essays collected in Greg Lynn's *Folding in Architecture* prompted a critical turn in architectural thought in the early 1990s. This symposium will consider the sources, contexts, influences, and legacies of these seminal texts. At the MAK Lecture Hall. Call (431)711/36-248 or visit www.MAK.at.

Architecture and Inspiration: Frank Lloyd Wright's Influences
Chicago
Through May 21, 2005
Spring Adult Classes held on Saturdays. At the University of Chicago Gleacher Center. For further information, call 800/997-9689 or visit www.grahamschool.uchicago.edu.

Lecture: Julia Czerniak
Los Angeles
May 23, 2005
Julia Czerniak is an associate professor at Syracuse University School of Architecture, visiting faculty member in the UCLA Department of Architecture and Urban Design for the spring quarter, and principal of Clear in Syracuse, N.Y. She was editor of the publications *CASE: Downsview Park Toronto* (Prestel 2001) and *Large Parks* (Spacemaker Press, 2004). She has lectured widely and has been a guest faculty member at Harvard, the University of Pennsylvania, and the University of Toronto. At UCLA, Department of Architecture and Urban Design, Perloff Hall. Call 310/267-4704 or visit www.aud.ucla.edu.

Lecture: Factory Built Components and the Modern American House
Washington, D.C.
May 25, 2005
The building industry continues to improve its efficiency and capabilities. Jim Petersen, with Pulte Home Sciences, will discuss Pulte's current work with large-scale, factory-built components that can be easily transported and effectively and efficiently incorporated into the residential home. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lecture: Kathryn Gustafson: Moving Horizons
Washington, D.C.
May 26, 2005
The landforms designed by landscape architect Kathryn Gustafson, translate concepts that strengthen a site's nature, history, culture, and function. Principal of Gustafson Guthrie Nichol, Seattle, and Gustafson Porter, London, she will discuss her firms' projects, including the Lurie Gardens in Chicago's Millennium Park, the Diana, Princess of Wales Memorial in London, and the recently commissioned Washington Canal Park in Washington, D.C. Call 202/272-2448 or visit www.nbm.org.

Architects in Troubled Times: Mies and the Making of Modernism
Chicago
June 4, 2005
Noted author and historian Franz Schulze will deliver the keynote address at a conference focused on the legacy of Mies van der Rohe, one of the 20th century's most significant architects. At the Illinois Institute of Technology. Call 312/922-3432 or 312/332-5870 for more information.

Rhode Island Symposium, "Manifesto Challenge: Fostering Resilient Communities"
Providence
June 5–7, 2005
This symposium will investigate and seek to understand the transformation processes that are taking place in the cities of Providence and Liverpool. Once successful port cities built on trade in the 19th and early 20th centuries, they both fell into decline by the 1970s. Recently they've seen a remarkable turnaround. The goal is to improve the quality of the questions we ask about urban transformation and to reveal important factors in common between these two cities. Call 703/830-4176 or visit www.rsa-us.org or www.theRSA.org.

The New York State Urban Development Corporation Symposium Committee
New York City
June 11, 2005
The symposium's panels will discuss the UDC initiative, operations, emphasis on design quality and livability, the role of politics, and the future of housing for people of limited income. Panelists will include former UDC principals, housing developers of for-profit and not-for-profit projects, architects and planners,



First National Bank of Hawaii, Honolulu, HI
Kohn Pedersen Fox Associates – Architects
Gensler – Interiors

The trend toward sustainable design and daylighting has opened new opportunities for the architect and designer. It has also brought to light new challenges, notably the impact of the solar ray to the designed environment.

With over 30 years experience, MechoShade® has established itself as the leading single-source manufacturer of complete integrated solar shading systems, controls and daylighting solutions. Our experience in motorized and manual shading is unsurpassed. We offer a wide variety of control solutions for both commercial and residential applications. From simple line voltage switches to networked, addressable, building-wide controls, MechoShade offers a variety of solutions including integration into 3rd party Lighting, BMS and A/V Systems. And with over 100 visually transparent shade cloths in various weaves, densities and colors, our manual and motorized systems can meet any performance and design requirement.

That's why no matter what the design aesthetic, from the most eclectic interiors to the most dramatic minimalist settings, you'll find MechoShade bringing sustainable design to light.

Please visit us at AIAExpo 2005, Booth 859

© 2004, MechoShade Systems, Inc., Long Island City, NY. All rights reserved.

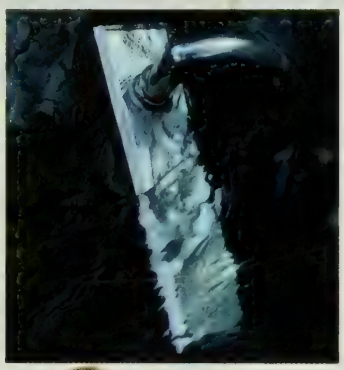
MechoShade™
The Architect's Choice.

MechoShade Systems, Inc.
42-03 35th Street, Long Island City, NY 11101
Tel: 718-729-2020 • Toll Free: 877-774-2572
Fax: 718-729-2941 • www.mechoshade.com

CIRCLE 326 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Stone River Bronze







door hardware • accessories
hinges • cabinet hardware
bath hardware
window & patio door

classic series • designer series

StoneRiverBronze.com

CIRCLE 327 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

architectural historians and critics, and current housing officials. In conjunction with the exhibition *Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation*. At the Graduate Center, CUNY. Visit www.udchousing.org.

NeoCon World's Trade Fair
Chicago
June 13–15, 2005
An important annual event for professionals who design, plan, or manage any type of commercial or residential interior. With thousands of new product introductions and top industry players, NeoCon includes more than 1,200 showrooms and exhibitors. At the Merchandise Mart. Call 800/677-6278 or visit www.merchandisemart.com.

Green Cities Mundaneum 2005: IV International Reunion of Architecture
San José, Costa Rica
June 23–25, 2005
Mundaneum is dedicated to the discussion of the state of cities, mainly in the developing world, its impact on the natural environment, and of recent world architecture. Organized every two years by the faculty of the Architecture and Urbanism department of Universidad del Diseño, speakers include Jamie Lerner of Curitiba, Brazil, Albert Pope of Rice University, Houston, architects Michael Sorkin and Steven Ehrlich, as well as other experts from Europe and Latin America. For further information visit www.unidis.ac.cr.

The UIA 2005 Istanbul Congress
Istanbul
July 3–7, 2005
The UIA 2005 Istanbul Congress will be organized under the theme of "Cities: Grand Bazaar of Architecture" as a multidimensional event including meetings, conferences, interviews, exhibitions, competitions, tours, an architectural fair, as well as social and cultural activities. Visit www.uia2005istanbul.org for more information.

Glenn Murcutt International Architecture Master Class
Sydney
July 10–24, 2005
Commenced in 2001, participants in the annual master class have included architects, academics, postgraduates, and senior students from around the world. Glenn Murcutt, 2002 Pritzker Prize laureate and visiting professor at many prestigious international universities, leads the master class, a two-week residential studio program which will be held for one week at the Boyd Education Centre "Riverdale" (described as Murcutt's "Master Work") and for the second week at the University of Sydney School of Architecture. Visit www.ozetecture.org.



CA/BOOM II: The State of Contemporary Design Now
Santa Monica, Calif.
July 28–31, 2005
This three-day event showcases contemporary architecture and independent contemporary design. Professionals and design enthusiasts will be exposed to an array of contemporary and non-traditional architecture, interior design, furniture design, and landscape design through a provocative and entertaining mix of gallerylike exhibition, guided home tours, and speaker conferences. At the Santa Monica Civic Auditorium. Call 310/306-6677 or visit www.caboom2.com.

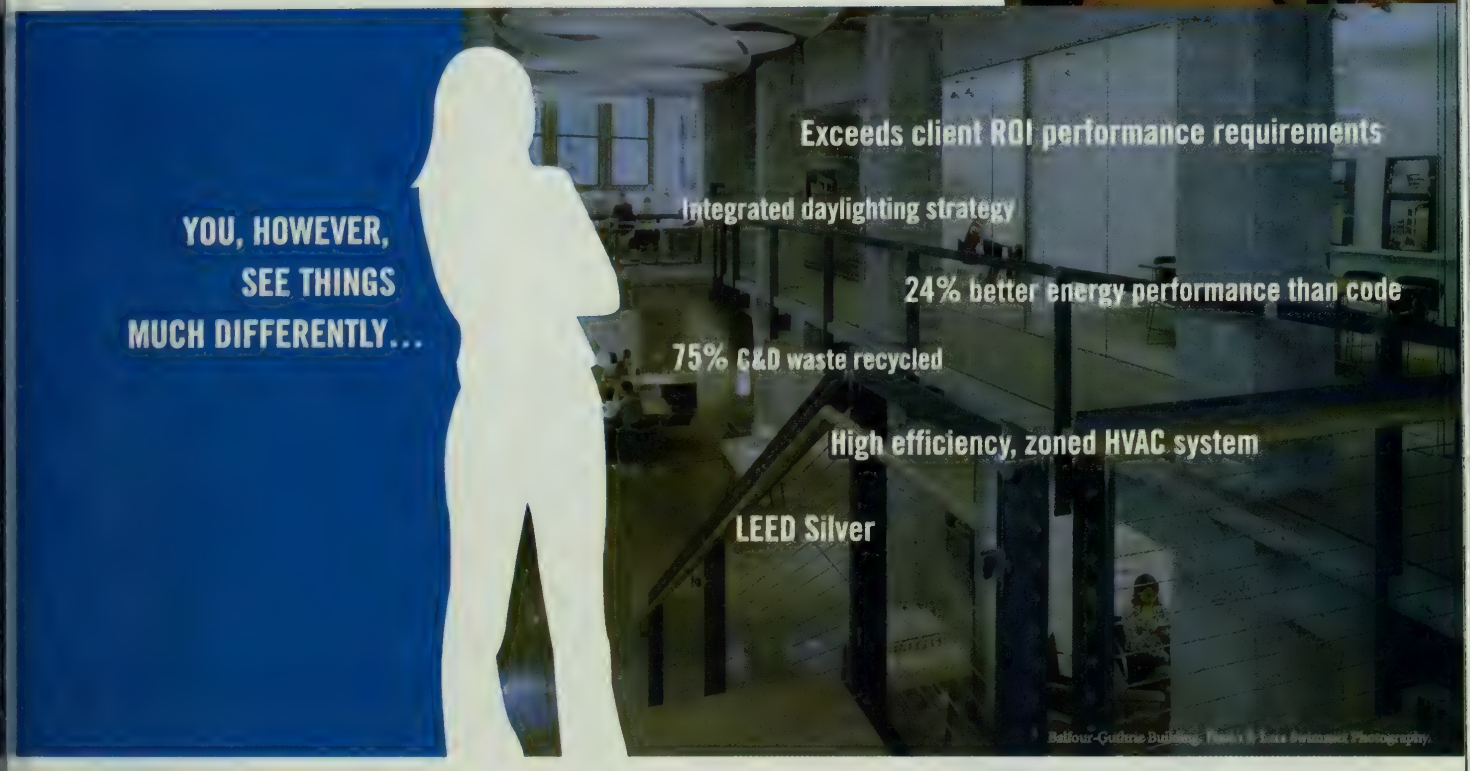
Competitions

2005 Summer Faculty Fellowship
Deadline: May 4, 2005
Each year the Boston-based design firm Goody Clancy offers a unique Professional Fellowship to an individual motivated to contribute to and gain experience from the firm. In addition to a $15,000 stipend, the selected fellow will spend the summer at the Boston office and have access to the firm's resources. For further information, call 617/850-6556 or visit www.goodyclancy.com.

Promosedia International Design Competition: Ideas for Chair Design
Deadline: May 6, 2005
The aim of the competition is to stimulate creative ideas, which must be technically feasible. Submissions are invited that express originality and innovation and that identify the use and function of the chair, giving due consideration to ergonomics, choice of materials, and the requirements of mass production. Call 39/0432-229127 or visit www.www.promosedia.it.

MOST PEOPLE SEE BUILDINGS THIS WAY.





Balfour-Guthrie Building, Photo © Tara Swiencicki Photography

ith an emphasis on the costs and benefits of building green, Greenbuild 2005 will deliver three ays of dynamic educational programs, a full range of LEED workshops, 15 Master Speakers, nple networking events and the latest innovations from over 500 exhibitors.

hether you're an experienced practitioner or just entering the world of green building, ou'll meet the right people, find the right courses, share in an extensive program events designed to enhance your business, inspire your practice and improve your bottom ne at Greenbuild 2005.

lark your calendar for November 9–11. Register online now at www.greenbuildexpo.org

e'll see you in Atlanta!

Want to see more?
Want to learn more?
Want to experience more?

Register online now for EARLY DISCOUNTS at:
www.greenbuildexpo.org

greenbuild
International Conference & Expo
Atlanta, November 9-11, 2005

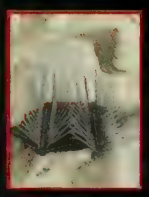


CIRCLE 328 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Architectural Bird Control



only from Nixalite®



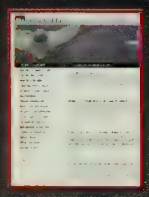
Nixalite® Strips
- All 316 stainless steel
- Inconspicuous control
- Proven no-gap design
- Lasts a life time
- Works for all birds



Bird Netting
- 3 lines of bird netting
- All nets UV resistant
- Lightweight & strong
- Seamless construction
- Complete hardware



FliteLine
- Stainless post & wire
- 2-wire per post design
- Stronger, thinner posts
- Fastens to all surfaces
- Discreet deterrent



New Website
- New Arch Info Center
- Current 3-part specs
- Submittal information
- Automated estimates
- Installation drawings

Free Catalog:
www.nixalite.com
Ph 800.624.1189
Fx 309.755.0077

Nixalite of America Inc
1025 16th Ave. East Moline, IL 61244
Email:birdcontrol@nixalite.com

Protecting America's Heritage Since 1950!

CIRCLE 329 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

AIA New England Design Awards
Deadline: May 17, 2005
Any built project of any type anywhere in the world by any New England architect is eligible and any architect anywhere in the world may submit projects built in New England. Visit www.architects.org.

AIA/LA Restaurant Design Awards
Deadline: May 20, 2005
The first Los Angeles Restaurant Design Awards will recognize edgy, elegant, and functional restaurant design. For information, call AIA/LA at 213/639-0777.

ANAS International Design Competition
Deadline: May 30, 2005
Three design competitions over two selection phases: a preliminary design of two bridges over the River Arno in Florence; an environmental architectural project for the entrance and exit of the new Mestre Motorway Tunnel in Venice; and a relandscaping along the Salerno-Reggio Calabria Motorway, including a motorwayside museum. Visit www.arcaedizioni.it/anas/.

2005 USGBC Natural Talent Design Competition
Deadline: June 10, 2005
This competition provides an applied learning experience in the principles of integrated design, sustainability, innovation, and social consciousness—all of which are components of the LEED Green Building Rating System. There will be two categories: New Construction and Existing Building. Working with the Boys & Girls Clubs of America the USGBC will select two Boys & Girls Club projects. Visit www.usgbc.org/chapters/emerginggreen.

John M. Clancy Award for Socially Responsible Housing
Deadline: June 13, 2005
Any public- or private-sector multifamily project anywhere in the U.S. that provides shelter for low- and/or moderate-income residents may be submitted by any individual, community group, or organization anywhere in the world. Visit www.johnclancyaward.org.

Benjamin Moore HUE Awards
Deadline: June 30, 2005
Architects and designers who incorporate color in innovative and imaginative ways through the use of interior and exterior paints, building materials,

Cost estimating data you can count on!

The 2005 Sweet's Cost Guides



CALL 1-888-264-2665
Please specify priorty code 444T

McGraw-Hill CONSTRUCTION Sweets
BNi Building News
1612 S. Clementine, Anaheim, CA 92802
www.bnibooks.com



elegance, beauty, style... privacy

The Translucence Series™ Waterfall
Architectural water elements from
the premier maker of indoor waterfalls

Harmonic Environments www.HarmonicEnvironments.com 800.497.3529

CIRCLE 330 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Exactly what
our doors expect
and deserve.



Marvin introduces
Marvin Architectural Hardware:
An exclusive selection
of designer handle sets
to complement our
factory-prepped French Doors
with no need for additional
custom modifications.
Please call 1-800-321-0039
or go to www.marvin.com
for a brochure or
to find the dealer nearest you.

MARVIN
Windows and Doors

CIRCLE 331 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

textiles, and other surfaces are being encouraged to enter the first annual Benjamin Moore HUE Awards. Visit www.benjaminmoore.com.

14th Annual Ermanno Piano Scholarship
Deadline: June 30, 2005
This scholarship was created for recent graduates of architecture to give them the opportunity to continue their education through a six-month internship within the Renzo Piano Building Workshop in Paris. Visit www.rpbw.com.

Solutia International Design Awards
Deadline: June 30, 2005
Now in its seventh year, the Solutia International Design Awards is a global competition that pays tribute to architects, interior designers, automotive designers, and laminators who have used laminated glass liberally in their design. Entries are being accepted for the awards, which will recognize projects that demonstrate innovative uses of any of Solutia's architectural glazing products. Visit www.vanceva.com/design.

Vetter Inspired Project (VIP) Awards
Deadline: July 1, 2005
An annual national design contest for architects and custom builders, open to any project completed between January 1, 2002, and June 30, 2005, using Vetter windows and patio doors. Call 800/838-8372 or visit www.vetterwindows.com.

Shinkenchiku Residential Design Competition 2005
Deadline: July 13, 2005
A call for entries that explore new potential in architecture through the design of "the residence, a place for human dwelling." Two architects, Tadao Ando and Richard Rogers, will serve as judges. For further information, visit www.japan-architect.co.jp/english/5info/topics/skcompe2005/skcompe2005.html.

The 22nd Antron Fiber Design Award
Deadline: September 16, 2005
This award program recognizes designers who are setting new standards of creativity in commercial interior design through the innovative use of carpet. Visit www.antron.invista.com/designwards.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com.

NATIONAL BUILDING MUSEUM
AT NBM

lectures

May 2
Private "Public" Spaces
Jerold Kayden, Harvard Graduate School of Design; Andrew Altman, Anacostia Waterfront Corporation; and Paul Farmer, AICP, American Planning Association



May 6
SHoP / Sharples Holden Pasquarelli
Gregg Pasquarelli, principal, New York

May 26
Kathryn Gustafson: Moving Horizons
Kathryn Gustafson, ASLA, principal of Gustafson Guthrie Nichol, Seattle and Gustafson Porter, London

exhibitions

OPEN: new designs for public space
through May 15, 2005



Tools of the Imagination
through October 10, 2005

Liquid Stone: New Architecture in Concrete
through January 29, 2006

national building museum

401 F Street NW
Washington, DC 20001
202.272.2448
www.NBM.org

For more information and to register for programs, call or visit our website. Discounts for members and students.



Italian works of Art around the World.

There are many works of art by Italians that are not found in museums. Since the dawn of civilization, Italians have created and exported some of their most lasting works of art in Natural Stone: statues, mosaics, floors, balustrades, columns, countertops, stairs and facades found in buildings around the world. PIETRA NATURALE is recognized as the highest quality of Italian Craftsmanship and stone processing technology. Look for our PIETRA NATURALE trademark as your assurance of an Italian work of art in Natural Stone – the perfect encounter between man and nature.

www.pietranaturale.com

PIETRA NATURALE

Ministero delle Attività Produttive

Italian Trade Commission
Los Angeles Office

ASSOMARMI

MADE IN ITALY

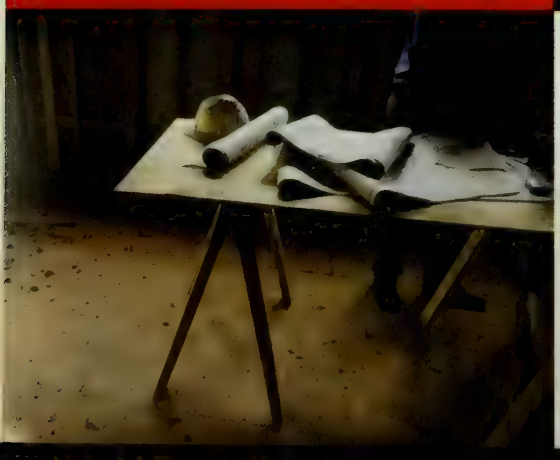
CIRCLE 332 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

THE INDUSTRY STANDARD.

AIA Contract Documents are the way everyone in the

can safeguard their interests and ensure all projects meet the same

AIA Contract Documents



Put the most widely used contract documents to work for your firm.

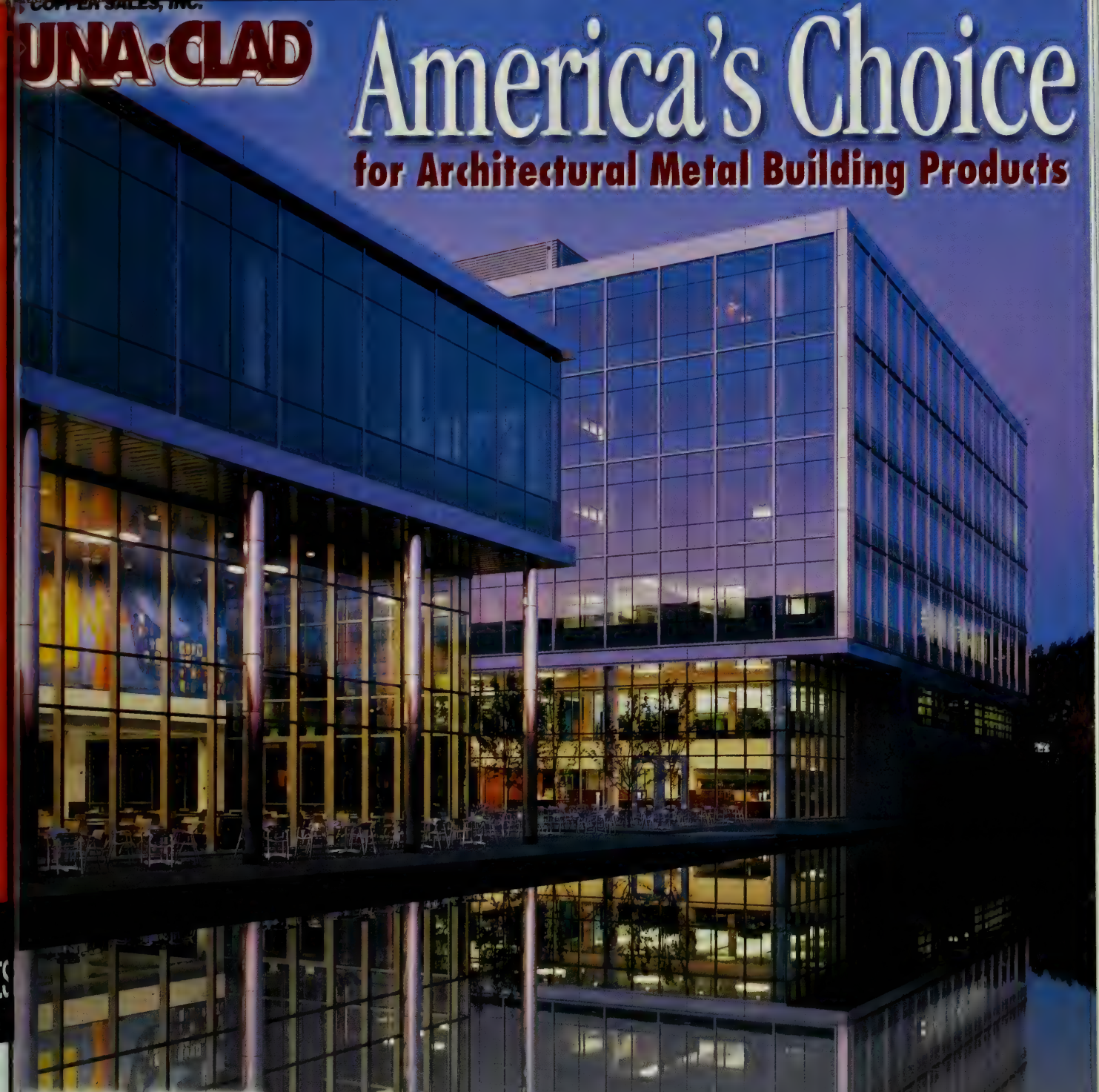
Go to *www.aia.org* to purchase the industry standard today.

COPPER SALES, INC.

UNA-CLAD

America's Choice

for Architectural Metal Building Products



UNA•FAB™ Wall Panels & Column Covers

- Design flexibility in shapes, colors, and finishes
- Superb flatness and excellent rigidity
- Radiused applications

Call UNA-CLAD today and speak with our experienced, knowledgeable staff.

800.426.7737

www.UNACLAD.com

CIRCLE 333 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PROMOSEDIA2005
INTERNATIONAL
CHAIR EXHIBITION

what

THE ONLY SHOWCASE
of its type in the world specialized in seating, promoting chair design open to the trade and professionals only

when

SEPTEMBER 8TH–11TH
8,000 products on display, exhibitors from Europe and overseas, visitors from 73 countries in 2004







where

UDINE, ITALY
near Venice, in the heart of the industrial chair district, with an old tradition and know-how in chair manufacturing





why

ESPECIALLY CHAIRS
in the chair district about 1,000 manufacturers produce about 40 million chairs every year, 1/3 of the total world's production



www.promosedia.it

CIRCLE 334 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PHILIP JOHNSON/Essay by Schulze *(continued from page 178)*

bined with a ravenous ambition defeated the self-discipline necessary to explore a stylistic approach in depth and thereby to master it. Sometimes he seized upon impressive forms, such as the IDS Tower in Minneapolis (page 179, *6*), Pennzoil Place in Houston (page 180, *8*), or the space frame of the Crystal Cathedral in Garden Grove, California (page 179, 5). Then, virtually as soon as such concepts struck him, he would abandon them, turning away like an undiscriminating child and delivering himself of bizarre mutations like the Bank of America Center (formerly Republic Bank) of Houston (1984), or that ultimate vulgarity, the multi-use Crescent in Dallas (1985).

Curiously, Johnson's almost involuntary flitting from style to style does not address the one overarching consistency in his approach to the profession—more exactly, to the art. He never stopped believing that the aesthetic dimension was the only admissible measure by which architectural quality could be judged; social, economic, political, and moral values mattered not at all. In fact, to some extent his passion for how

FOR JOHNSON, THE AESTHETIC DIMENSION WAS THE ONLY ADMISSIBLE MEASURE BY WHICH ARCHITECTURE COULD BE JUDGED.

things look rather than what they stand for accounts for the fascination he found in the pageantry—the leather jackets, the parades of goose-stepping soldiers, the nocturnal rallies with search lights scanning the skies—at which the Nazis were so skilled.

When playwright Arthur Miller died just a few weeks after Johnson, it was impossible not to notice the enormous difference in motives for creative expression between two of the most famous people in the American arts of the 20th century. Miller was guided—driven—by social and moral issues that he insisted required taking sides. By contrast, Johnson, the cynic, explained: "I don't believe in the good, the true, or the absolute, or in justice or mercy." Instead, he took his cue from the Sophists of ancient Greece, who understood truth in a relative and contingent manner and advocated persuasion in lieu of "proof," thus elevating rhetoric to the highest place in human communication. Surely, he was a master of self-promotion, evident in the exceptional wit he brought to bear when speaking extempore. Well into his 80s, he could hold an audience in the palm of his hand: the architect as standup comedian.

That showmanship points to another, superficially related but ultimately profounder effect, in which his gift for words was employed to an end not merely cynical but worthy of being taken seriously even by his harshest critics. In the years he spent as the on-and-off head of the architecture department at the Museum of Modern Art, he did more than anyone to make the study of architecture a museological discipline of the highest order. He was the catalyst behind the historic *Modern Architecture: International Exhibition* of 1932 that introduced America to the great European Modernists, chiefly Mies van der Rohe, Le Corbusier, and Walter Gropius, who set the course for world architecture for generations. He followed that success in 1934 with *Machine Art*, in which he convincingly demonstrated the beauty and elegance of ordinary manufactured tools. And he organized MoMA's 1947 retrospective of Mies's work, for which he wrote a monograph that remained for decades the prime source of information about one of the greatest architects of modern times.

He was responsible for other shows and other prose, most of it worthy of engaged study. His *Philip Johnson: Writings*, published in 1979, reveals an acute critical and historiographic mind—a figure far more admirable than the self-serving image dished up in 1994 in *Philip Johnson: The Architect in His Own Words*, where interviewers Hilary Lewis and John O'Connor gave him plenty of room to try to show the

world what a wonderful designer he was.

The lasting legacy? It probably is too early to say for sure, but from this biographer's corner, history will remember Johnson the curator, critic, and historian longer and with greater respect than it will Johnson the architect. ■

PHILIP JOHNSON/Essay by Stern *(continued from page 180)*

of the architect-turned-sculptor Tony Smith—to the skyscraper type. But Johnson's greatest accomplishment as a skyscraper architect was returning the romantic dimension of the 1920s to that building type. In the wake of post-Miesian revisionism, the skyscraper had become diagrammatic, perfunctory, and dull. Johnson's skyscrapers of the 1980s showed he was the new Raymond Hood, finding poetry in the adaptation of past forms to new technologies and a new scale of enclosure.

With AT&T (page 178, *1*), Johnson picked up where McKim, Mead and White had left off. The loggia at the building's base was decidedly monumental, a place for pedestrians to crisscross under a soaring canopy. I wish it hadn't been filled in with stores and showrooms. In contrast to AT&T, the "Lipstick" Building (page 180, *9*), also in Manhattan, is sheer fun and games. Its telescoping mass is a very New York design, highly reminiscent of the setback towers of the 1920s. More specifically, the "Lipstick" Building evokes an unrealized proposal of Raymond Hood's for Rockefeller Center in 1931. PPG Place in Pittsburgh (1984) may be a bit thick-waisted, but its glassy Gothicisms do bring sparkle and a sense of wonder to that city's skyline. The Bank of America Center (formerly Republic Bank) in Houston (1984) revived the fanciful skyscraper massing of 1920s setback skyscrapers; and Transco Tower in Houston (1983), following the example of Bertram Goodhue's various late towers, shoots skyward with iconic clarity.

Johnson was one of the few architects of his generation who could create convincing monumental form (Louis Kahn was another, and on occasion, Eero Saarinen). The Roofless Church in New

JOHNSON HAS BEEN ACCUSED OF BEING DERIVATIVE, BUT ONLY THE NAIVE PRETEND TO UNCONTAMINATED ORIGINALITY.

Harmony, Indiana (1960), with its walled temenos setting off the astonishingly complex geometry of the shingle-clad pumpkin dome that shelters Jacques Lipschitz's sculpture, is unforgettable, a great place of quiet, opening on one side to frame a heartbreakingly beautiful view of corn fields stretching to the horizon. His unrealized proposal for Ellis Island (1966) would certainly have rivaled the Statue of Liberty and Wright's Guggenheim Museum as a New York City icon. What a bold project it is, with its dynamic coil of ramps ringing a truncated cone! His New York State Pavilion for the 1964 World's Fair, even in its present state of dereliction, is one helluva marker on the flat landscape of Queens, New York.

Johnson has been accused of being derivative. But who isn't in some way or other? Only the most naive of us pretend to uncontaminated originality. Among the postwar Modernists, Johnson was the compulsive truth-teller, not only about the work of others, but also his own: "You cannot not know history," he admonished Yale students in the late 1950s. Johnson may have proclaimed his dependence on sources a little too much for his own good—he could be self-deprecatory to a fault—but in roaming around history, he always transformed what he saw in the past into something of his own.

I would like to continue extolling the virtues of Johnson's architecture, but I think it's important to shift *(continued on next page)*

Tile and stone should last forever...

The specification process should NOT!



Complete customizable specifications and details for successful ceramic tile and stone installation systems – ***in seconds!***

Request yours at **www.laticrete.com/ag**

LATICRETE®

Globally proven. Professionally endorsed.

www.laticrete.com • support@laticrete.com

©2005 LATICRETE INTERNATIONAL, INC.
LATICRETE, LATAPOXY and the logo are Registered Trademarks of LATICRETE International, Inc.

CIRCLE 335 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/ A-1410-0405



The World's First...

Visit our website or order our full-color catalog to see all 31 of our power & data grommets and our other components.

PCS29

... Power and Data Grommet that sits on the desk! No holes, no clamps needed! Ideal for training tables, home offices, libraries. Flexibility and portability. Comes with one power outlet, one Cat. 5E data module. Black only. Size: 4 11/16" tall, 3 1/8" base.



"FINE ARCHITECTURAL HARDWARE FOR YOUR FINE FURNITURE"®

Doug Mockett & Company, Inc. • Manhattan Beach, CA • 800.523.1269

MOCKETT

DOUG MOCKETT & COMPANY, INC.

www.mockett.com

CIRCLE 336 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PHILIP JOHNSON/Essay by Stern *(continued from previous page)*

emphasis and touch on another aspect of his life—a sensitive topic, the handling of which in some of the obituaries and posthumous commentaries has bothered me: Johnson's youthful foray into politics.

Many have brought up Johnson's Nazi and American right-wing sympathies of the 1930s as if this were secret information. Embarrassing, yes, but not secret. In fact, the matter was long ago acknowledged and discounted by those who knew him and by others whom he reached out to in an effort to make amends. At Yale, where I studied architecture in the early 1960s, Johnson was very much on the New Haven scene. And we all knew about his 1930s Nazi sympathies. Many of us read his essays in *Social Justice* and the relevant pages by William Shirer in his *Berlin Diary*. Ulrich Franzen, who had left Germany as a teenager in the 1930s and was a popular teacher at Yale, made us aware of how Johnson had been made to suffer for his misdeeds when he studied at Harvard's GSD in the early 1940s and when he later served in the Army during World War II. While

JOHNSON'S 1930S NAZI SYMPATHIES WERE NO SECRET TO THOSE WHO KNEW HIM AT YALE IN THE EARLY 1960S.

to my knowledge, neither Yale faculty nor students confronted Johnson with the embarrassing facts of his youthful political wanderings, we did discuss them among ourselves, speculating about what had attracted him to the Nazi cause; but then, we also speculated on why others were virulent Stalinists in the same era and continued to be so well beyond the point when Stalin's evils were common knowledge.

It was not only Johnson's pro-Nazism, but also his presumed anti-Semitism that we considered. As Johnson and I became friends, we talked about anti-Semitism and its consequences. For one thing, we talked about the "social" anti-Semitism that was a fact of American life until well after World War II. Johnson was brought up in a milieu where social anti-Semitism was acceptable. But by the time he went to Harvard College in the 1920s, as the cliché used to have it, some of his best friends were Jewish: Eddie Warburg and Lincoln Kirstein to name two who became particularly close to him. Of course, there is a wide chasm between social anti-Semitism and Hitler's virulent strain of hate. But Johnson was not alone in failing to recognize the horror of Hitler's obsession. Many Americans, in fact, did not take in the full magnitude of Hitler's hatred until the late 1930s, and even some Jews in Germany clung too long to the belief that Hitler's talk was just that! But when Johnson did come to, seeing Hitler for the evil he was, he quickly turned away from politics. Johnson's misadventures of the 1930s need to be seen against a broader canvas of the times and in light of all sorts of demons that plagued him then. Many of his Jewish friends like Kirstein and Warburg, who knew of his personal agonies, remained loyal to him despite whatever misgivings they may have had about his political leanings.

In the 1970s and 1980s, Johnson and I talked about those years. Some conversations form an oral history he and I made for Columbia University. I frankly wish I had also taken the opportunity to discuss the topic with his Harvard friends. But now it's too late; they're all gone. I do remember one conversation with Johnson in which he said to me, "I have paid for this in so many ways." One way he paid was with the Congregation Kneses Tifereth Israel Synagogue in Port Chester, New York, which he designed in 1956. For this project, with its limpid, light-filled, Soane-inspired sanctuary space, he gave up his fee because he was so grateful for the support the congregants of that synagogue showed him.

But why go on? In reckoning a life's worth, there are bound to be so very many aspects to consider, not all of them admirable—for me,

Johnson's worth as an architect, as a mentor, and as a friend more than outweigh a stupid, repugnant misalliance he long ago repented.

The culture of architecture is vastly diminished because Johnson is no longer here to spur us along with the example of his work, his intellectual curiosity, and the élan of his very being. I miss him very much. ■

PHILIP JOHNSON/Essay by Sorkin *(continued from page 183)*

and Johnson was unable to draw two parallel lines, neither proposed any purpose for his project other than self-entertainment (in Meyer's case, what used to be called self-abuse). Both were flacks for the kind of confident American styles of hyper-consumption that were spawned by postwar prosperity and that morphed over the succeeding years into the unsustainable Bushian greed ravaging the planet today.

Both men had, to put it mildly, problematic politics. Meyer floundered on his "Playboy Philosophy" approach to women. If he was less self-conscious than Hugh Hefner, who made endless claims to be an avatar of liberation, Meyer nonetheless shared the same stupid core of unremitting objectification, never mind efforts to invent him as a kind of proto-feminist. Johnson, whose writing is vastly overrated by his coterie of sycophants, was purer in his evil—although, like Meyer, he did contribute, via his utter cynicism, to the anything-goes assault on the era's hypocritical Puritanism. The generation of his Postmodern admirers (themselves using Johnson to justify a social indifference that pollutes the profession to this day) worked hard at ignoring (or excusing) the fact that Johnson was an out-and-out Nazi. This was not the youthful indiscretion that many suggest, but a dedication of years, and one for which Johnson never fully accounted.

Johnson's fascination with fascism deeply informed his work. Just as Hitler's vision for the world was deeply couched in an aesthetic vision of uniforms, redemptive violence, and racial purity (and just as Walt Disney's seemingly benign project occluded his own racism and anti-Semitism), so Johnson's emptily aestheticized world view conceals a politics of privilege and indifference. (For a discussion of Disney's preju-

JOHNSON DID CONTRIBUTE, VIA UTTER CYNICISM, TO THE ERA'S ANYTHING-GOES ASSAULT ON HYPOCRITICAL PURITANISM.

dices, read Richard Schickel's *The Disney Version*, published in 1997 by Ivan R. Dee.) In a life of nearly a century, Johnson never interested himself in any of the registers through which architecture and its philosophy can help enfranchise; never showed much, if any, concern with housing the poor, with the environment, with the fate of cities. His own philosophy was rooted in a school-boy Nietzcheanism of supermen and the will to power. Indeed, his major contribution to the intellectual history of architecture is probably his early, largely successful effort to introduce Modernism to the United States (via the famous 1932 Museum of Modern Art *Modern Architecture* show) in a way that thoroughly sheared it of its originating commitment to social betterment, reducing its content to nothing but form.

My only regret over Johnson's shuffle from the coil is that he never wrote an autobiography (unlike Meyer, who left *A Clean Breast*, published in 1992). How fascinating it might have been to read his own account of his meetings with Kingfish Huey Long or Father Coughlin, his ride into Poland following the Wehrmacht, his appreciation of the décor at the Nuremberg rallies, his real opinion of the younger generation of architects who devoted so much time sucking up to him, his take on the so-called sexual revolution. Unfortunately, all that's left is his mediocre, superficial body of work and his lavish contribution to the politics of narcissism. The end of an era, let us hope. ■



Edgar Degas, Dancers at Rest 1884-1885
Musee d'Orsay, Paris, France

www.modernfan.com

CIRCLE 337 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"Born Again: A New Skin Offers a Fresh Start," Architectural Record (05/05, page 261).** 05EDITA

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through May 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit. Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	**6.**	a	b	c	d
2.	a	b	c	d	**7.**	a	b	c	d
3.	a	b	c	d	**8.**	a	b	c	d
4.	a	b	c	d	**9.**	a	b	c	d
5.	a	b	c	d	**10.**	a	b	c	d

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ☐ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ☐ Visa ☐ Mastercard ☐ American Express **Card#**

Signature **Exp. Date**

Check below:

☐ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

☐ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**



CIRCLE 338 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 339 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Rakks wall-mounted shelving at Christine Desrée Collection, Sarasota, FL Interior Design: Christine Desrée

SUPPORTING SPATIAL EFFECTS


Rakks Bracket


Rakks on Pole


Universal Bracket


Aria Bracket

We play a supporting role in interiors that create harmony between decor and architecture. With strong, innovative shelving systems that meet the demands of the world's top designers. Rakks. The choice for new and exciting shelving solutions. Visit us at www.rakks.com or call for a free catalog.

Rakks®

In supporting roles everywhere

Rangine Corporation | 114 Union Street | Millis, MA 02054800-826-6006 | www.rakks.com

CIRCLE 340 ON READER SERVICE CARD
OR GO TO WWW.LEADNET.COM/PUBS/MHAR.HTML

ARCHITECTURAL TRAINING AND RESEARCH PROGRAMS

RAFAEL VIÑOLY ARCHITECTS

An independent initiative to advance the craft of architecture through training and research

ARCHITECTURAL TRAINING

This course aims to develop the operational and intellectual instruments that are the basis of the professional practice of architecture. Without assuming the status of a formal architectural education, these classes are addressed to those involved in education or those already in practice who find a significant gap between the character of the formative instruction and the requirements of the professional field. The course is designed around the idea that architectural know-how is a conveyable body of knowledge rather than an intuitive ability that only develops with experience. Duration of the course is six months starting in September of 2005.
Tuition is free.

RESEARCH FELLOWSHIP

Rafael Viñoly Architects is offering fellowships to research ideas relevant to the practice of architecture and construction. This research is to be undertaken within the firm's New York City office but independent from the demands of any particular project. In addition to financial support of up to $60,000 RVA will provide equipment and materials identified by the applicants' proposal. Terms may last from four to twelve months starting in September of 2005.

For application [illegible]

CIRCLE 341 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

EXPERIENCE 3form PRODUCTS AT THE FOLLOWING 2005 TRADESHOWS

HD 2005	[illegible]	[illegible]	[illegible]
ICFF	[illegible]	[illegible]	[illegible]
AIA	[illegible]	[illegible]	[illegible]
NEOCON	[illegible]	[illegible]	[illegible]



3form®

MATERIALSOLUTIONS

samples: 3-form.com / 800.726.0126

CIRCLE 342 ON READER SERVICE CARD
OR GO TO WWW.LEADNET.COM/PUBS/MHAR.HTML

Go With The Best Choice in Anti-Slip Applications . . .



Slip Tech

ADA requires a COF of at least 0.6 ***wet***. ***Slip Tech***, since 1986, has exceeded these guidelines on ceramic tile and stone floors. Send us your sample and we'll test treat your material for free.

www.sliptech.com

Telephone: **1 (800) NO SLIPØ** *(1-800-667-5470)* • *E-Mail:* **brian@sliptech.com**

CIRCLE 343 ON READER SERVICE CARD
OR GO TO WWW.LEADNET.COM/PUBS/MHAR.HTML

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"Factors for Achieving Water Conservation Excellence," (05/05, page 284)** 05SPONN

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through May 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit. Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	**6.**	a	b	c	d
2.	a	b	c	d	**7.**	a	b	c	d
3.	a	b	c	d	**8.**	a	b	c	d
4.	a	b	c	d	**9.**	a	b	c	d
5.	a	b	c	d	**10.**	a	b	c	d

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ☐ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ☐ Visa ☐ Mastercard ☐ American Express **Card#**

Signature **Exp. Date**

Check below:

☐ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

☐ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

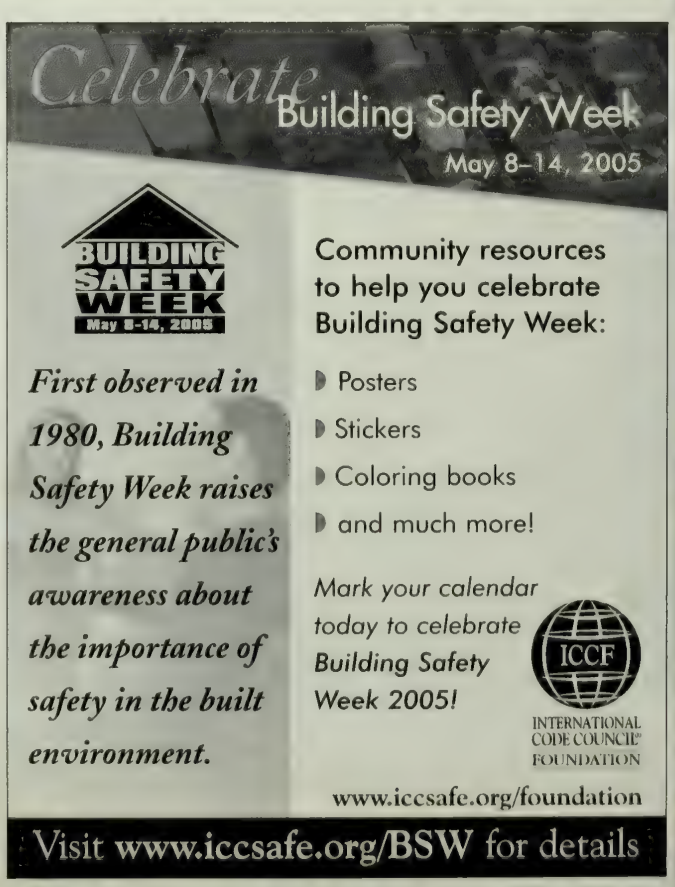
Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**



CIRCLE 344 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 345 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"Greater Vision: Alternate Window Materials in Commercial Buildings," (05/05, page 293)** 05SPONM

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through May 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit.
Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	e	**6.**	a	b	c	d	e
2.	a	b	c	d	e	**7.**	a	b	c	d	e
3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ❑ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ❑ Visa ❑ Mastercard ❑ American Express **Card#**

Signature **Exp. Date**

Check below:

❑ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

❑ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**



800 NORTH CAPITOL, WASHINGTON, DC

Dedicated to the quality design, manufacture and installation of architectural cast metal ornament.

HISTORICAL ARTS AND CASTING®

1(800)225-1414

www.historicalarts.com

HISTORICAL ARTS & CASTING ■ INC.

CIRCLE 346 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

The Best Way to Raise...

Visit our website or order our full-color catalog to see all the different configurations of MPBs and many other components.

MPB's

Shown here is MPB10. Our most popular diameter at 1 1/4". Available in 10 stock lengths from 1/4" to 12". Custom lengths available to 24".

Series also offers variations of MPB's – curved 180°, angled 30°, or with 90° angle.



"FINE ARCHITECTURAL HARDWARE FOR YOUR FINE FURNITURE"®

Doug Mockett & Company, Inc. • Manhattan Beach, CA • 800.523.1269

MOCKETT

DOUG MOCKETT & COMPANY, INC

www.mockett.com

CIRCLE 347 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"The Art of Product Research and Selection," (05/05, page 299)** 05SPONO

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through May 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit. Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	e	**6.**	a	b	c	d	e
2.	a	b	c	d	e	**7.**	a	b	c	d	e
3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ☐ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ☐ Visa ☐ Mastercard ☐ American Express **Card#**

Signature **Exp. Date**

Check below:

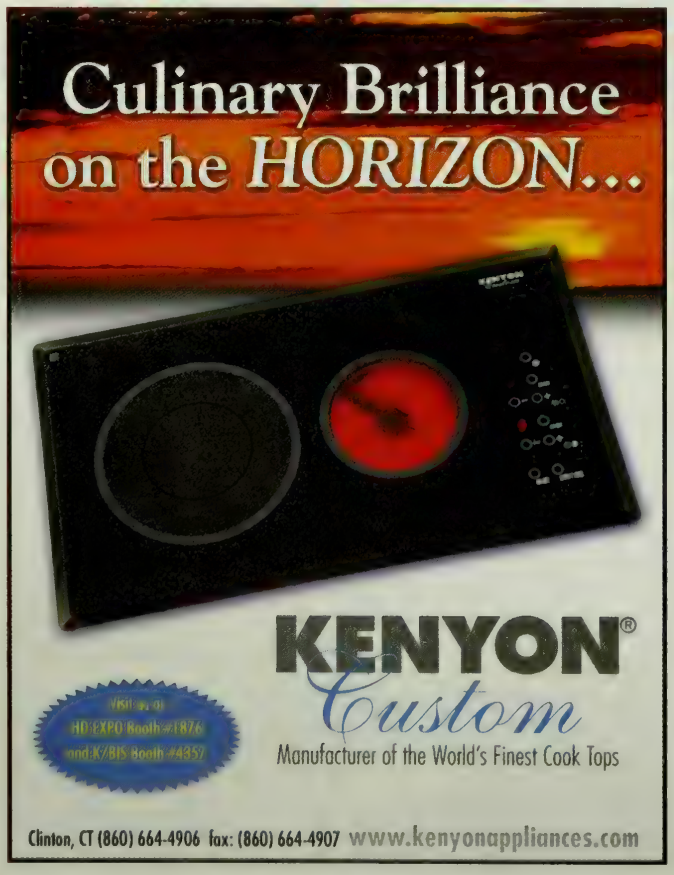
☐ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

☐ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

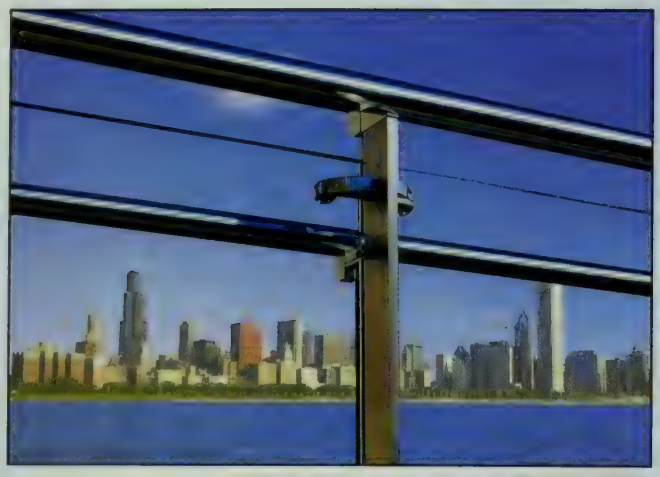
Signature **Date**



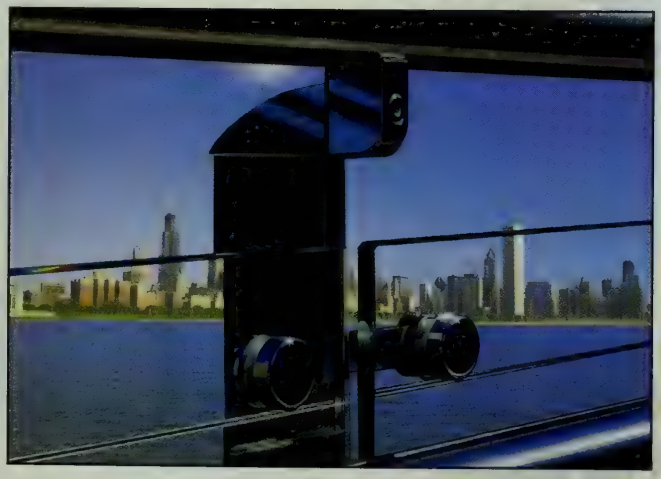
CIRCLE 348 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 349 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/







"Chicago System"

P&P Artec is proud to introduce its first railing system with a flat bar stainless steel baluster.

The "Chicago System" has a unique flat bar baluster instead of our customary round or oval tubes used in the Double Baluster, Modesto and Munich systems. Artec has built a reputation on 100% seamless handrail tubes, and our newest system is no exception. We weld and grind in the field to provide our customers a handrail tube without any visible joints and connections.

Artec is a national and international full service railing company. We work with you from the design stage until our installation teams complete the project.

P&P ARTEC
Stainless Steel Railings

700 Creel Drive, Wood Dale, IL 60191
Tel: 800-927-7346 • Fax: 630-860-5913
Web site: http://www.artec-rail.com

Please contact us for more information.
Binder, Samples, autoCAD-R14 details.

CIRCLE 000 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

STOP BY AND SEE US AT THE AIA EXPO 2005 BOOTH 3642

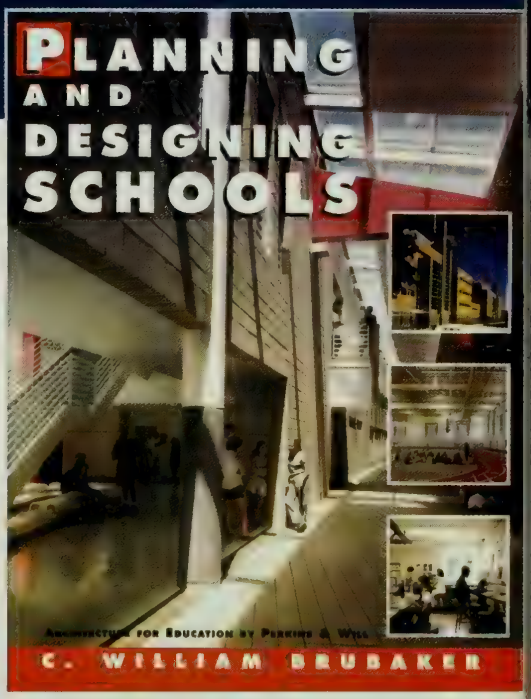
CIRCLE 350 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Available through the McGraw-Hill Construction Bookstore

Planning and Designing Schools

C. William Brubaker

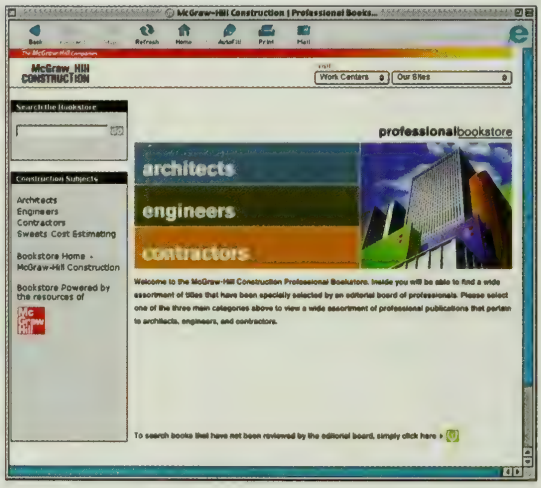
In *Planning and Designing Schools*, award-winning architect William Brubaker shares his knowledge and expertise, gathered over thirty years and more than 200 school projects, to show how to create practical, yet pleasing answers to the challenges of school design. This essential resource covers every phase of school design, giving complete information on such topics as master planning, energy efficiency, indoor air quality, and much more – and includes 22 informative case studies.



1997 • ISBN: 0-07-049405-3
240 pages • 200 illustrations • Hardcover

McGraw-Hill Construction Bookstore Price: $51.96

TO ORDER OR TO SEE OTHER GREAT TITLES, VISIT
www.books.construction.com



www.books.construction.com

At www.books.construction.com, you can choose from a wide selection of titles in architecture, construction, and engineering – from the brightest, most respected minds in the field. Our comprehensive online bookstore offers a special **20% discount, free shipping**, unparalleled customer service, and a host of other great features.

construction success starts with the
construction.com bookstore

McGraw-Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications

Find us online at www.construction.com

connecting people_projects_produ

The McGraw-Hill Companies



SOLID IS JUST BETTER.

The Koreteck™ Panelized Building System replaces metal studs, insulation and exterior sheathing with the superior performance of a solid noncavity wall. The proven benefits of the system include faster installation, higher R-Values, less waste, better sound insulation and mold resistance. Discover more about the solid core, solid system and solid thinking of Koreteck by calling or visiting us on the Web today.





KORETECK™
PANELIZED BUILDING SYSTEM

SOLID THINKING™

866-877-8335 • www.koreteck.com

Come see us at AIA Booth 3214

A BlueScope Steel Company

©2005 Koreteck

CIRCLE 351 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Master Specification & Product Selection Systems

1 General data

Arcom

MASTERSPEC®, the preeminent master specification and product selection system, is available in full-length, short-form, outline, and small project formats for projects of any size, type, phase, or complexity. ARCOM devotes over 25,000-hr. to updating MASTERSPEC each year and developing mini-research papers on each specification topic. MASTERSPEC Review Committees perform regular, extensive peer reviews unique in the industry. Now available, the most comprehensive LEED reference and specification tool available.

www.arcomnet.com

Publisher of MASTERSPEC®
Developer of SPECWARE®

Circle Reader Service #150

Metal Surfacing

5 Metals



Gage Corporation, Intl.

GageMetal. An innovative collection of 18 new designs suitable for walls, elevators, and column covers. Standard sizes 48-in. by 96/120-in. with available thicknesses from .025-in. aluminum to 16-ga. stainless steel. Custom design and collaboration is available. All GageMetal designs are available in sheet form for direct application to the job site substrate. They can also be panelized for demountable use with Z-bar clips or the Gage extrusion system. Fax number 608-269-7622 Email gage@centurytel.net

800-786-4243
www.gageverticalsurfacing.com

Circle Reader Service #153

Trench Drainage Systems

2 Site construction



ACO Polymer Products, Inc.

ACO Polymer Products, Inc. manufactures modular, precast polymer concrete and fiberglass trench drainage systems. ACO supplies products for any surface drainage need from residential to heavy industrial applications. Products are available in 4-in., 8-in., and 12-in. internal widths with a range of lockable grates to suit; a variety of neutral and pre-sloped depths are available to ensure excellent hydraulic performance. A full range of catch basins and accessories provide a complete drainage solution. ACO Drain products are produced and load tested to DIN 19580, the only standard specifically for trench drains.

440-285-7000
www.acousa.com
AIA booth 3515

Circle Reader Service #151

Pre-Engineered Railings

5 Metals



Handrail Design Inc.

inox™ Stainless Railing System: Manufactured of corrosion-resistant stainless steel, inox is ideal for interior or exterior applications in commercial and residential facilities. Infill materials are available in perforated stainless steel, tempered glass, and stainless steel rods. Handrails are available in wood/stainless, stainless, or colored nylon. Curved rails and custom designs are available. Complete supply and installation service are available throughout North America, which includes inox, CIRCUM™, HEWI® Nylon, and d line™ railings. Email info@hdirailings.com

717-285-4088
www.hdirailings.com

Circle Reader Service #154

Commercial Grade Outdoor Furniture

2 Site construction



Modern Outdoor

High style, clean-lined simplicity, short lead times, environmentally conscious materials—these are the attributes of Modern Outdoor—a producer of top quality outdoor furniture with a definitive modern aesthetic. The Modern Outdoor Collections are commercial grade products designed for the restaurant, hospitality, and resort industries, with an aesthetic that is perfect for a residential client's backyard setting. The entirety of the Collection is made from Ipe, Electropolished Stainless Steel, and Natural Composite materials. Modern Outdoor offers attractive pricing.

818-838-7060
www.modernoutdoor.com

Circle Reader Service #152

Wood Carved Pierced Mouldings

6 Wood & plastics



Architectural Products by Outwater, LLC

Outwater's Wood Carved Pierced Mouldings effortlessly and seamlessly fasten together via wooden dowels, which when 'glued' and inserted into the predrilled opposing holes of the adjacent Wood Carved Pierced Mouldings to be adhered, create consistent, uninterrupted linear runs of any desired length. Outwater's 2-ft.-long Wood Carved Pierced Mouldings are offered in Hard Maple, Cherry and Oak in five different design profiles and are pre-sanded, unfinished and ready to be stained or painted.

800-835-4400
www.outwater.com

Circle Reader Service #155

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASP

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Architectural Columns, Balustrades & Mouldings

6 Wood & plastics



Melton Classics, Inc.

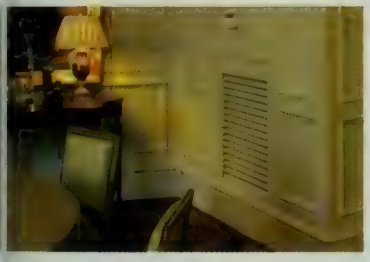
Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, moldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers a maintenance-free balustrade product ideal for any application.

www.meltonclassics.com

| Circle Reader Service #156

Wooden Return Air Grilles

6 Wood & plastics



Worth Home Products

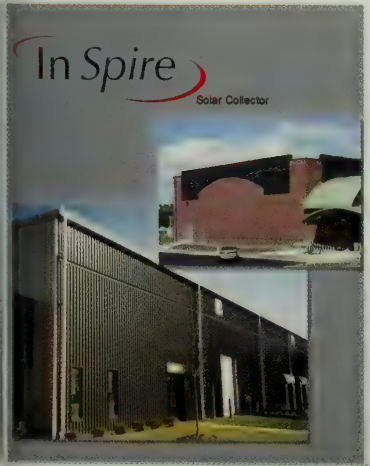
A new standard in classic homes. Worth Home Products, a manufacturer of wooden return air grilles, provides consumers with an attractive alternative to the standard white metal grilles. Worth's computer aided design ensures high efficient air flow while concealing filters. This patent-pending product is made from paint-grade Poplar and Birch woods and discreetly blends into ceilings or walls. Its locking system provides a safe and easy installation. Over 36 standard wooden grille sizes are available for quick delivery.

www.WorthHomeProducts.com

| Circle Reader Service #157

Metal Wall Cladding

7 Thermal & moisture protection



ATAS International, Inc.

ATAS International Inc. introduces the INSPIRE Wall System, a new metal wall cladding made from .032 aluminum with tiny perforations in a heat absorbing surface. The premium finish is available in sixteen standard colors. Mounted a few inches from the main wall, on preferably a southern exposure, fresh air is drawn through the perforations and directed into the building with a fan and duct system. Air space between the walls also acts as an insulator. INSPIRE Wall is environmentally friendly, because it uses clean, natural energy.

www.atas.com

| Circle Reader Service #158

Rainscreen Systems

7 Thermal & moisture protection



Boston Valley Terra Cotta Inc.

Boston Valley Terra Cotta, leader in the design and manufacturing of Architectural Terra Cotta, is manufacturing Terraclad™, Architectural Terra Cotta Rainscreen System. Produced in the U.S. in their Orchard Park, NY, factory, this system is available for new design and retrofit. Boston Valley Terra Cotta offers six standard profiles, six different widths, 8-in. to 16-in., lengths from 12-in. to 60-in., as well as custom designs per the architect's specifications. Also available are 13 through-body colors, custom colors, glazed finishes, and custom sizes and shapes upon request. Terraclad is a green material.

888-214-3655
www.bostonvalley.com

| Circle Reader Service #159

Four Full Layers of Weather Protection

7 Thermal & moisture protection



CertainTeed Corp.

Carriage House Shangle is equally at home on Victorian, colonial and contemporary designs. With an ingenious construction that combines two full-sized base shingles, Carriage House simulates the depth of natural slate, an illusion enhanced by wide scalloped corners, a deep shadow line and an oversized 8-in. exposure. Carriage House is built to last. Thanks to premium-grade materials and the exclusive CertainTeed Super Shangle® construction, a Carriage House roof provides four full layers of weather protection once applied.

800-233-8990
www.certainteed.com

| Circle Reader Service #160

Crimp-Curved Roof, Wall & Decking Panels

7 Thermal & moisture protection



Curveline

Curveline can crimp-curve metal panels in a range of profiles, substrates and finishes for structural or decorative use. Applications: roofs, walls, standard and acoustical decking, canopies, fascias, mansards, etc. Specifiers may source panels from manufacturers in 100+ factory locations and select the desired curving parameters, including simple, complex and multi-radius curves.

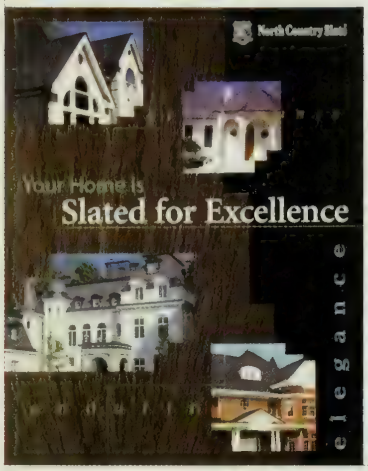
www.met-tile.com/curveline

| Circle Reader Service #161

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Slate Roofing Brochure

7 Thermal & moisture protection



North Country Slate

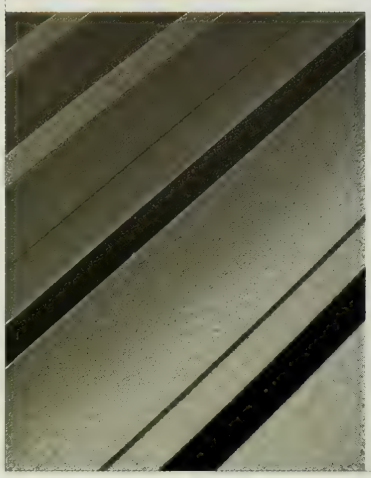
North Country Slate offers a new brochure explaining the design and performance advantages of their remarkable roofing material to your residential customers. In six glossy pages, 'Slated for Excellence' presents all the features and benefits to your client, the homeowner. Make sure you have this brochure on hand for your next discussion on slate roofing. Email info@ncslate.com

800-975-2835
www.northcountryslate.com

Circle Reader Service #162

Aged Galvanized Panels

7 Thermal & moisture protection



Steelscape, Inc.

Architects and designers have expressed a desire for corrosion-resistant roofing and siding materials which exhibit an aged appearance. Vintage™ aged appearance is uniform across all panels and will not degrade in surface appearance or corrosion resistance for up to 20 to 30 years. The product can be used in the as-acrylic-coated condition for "low-end" building applications intended for non-warranted applications whereby "natural aging" will commence after installation. For applications requiring superior surface appearance retention and corrosion resistance a PvDF topcoat is required.

888-285-7717
www.steelscape.com

Circle Reader Service #165

Shingle Panels

7 Thermal & moisture protection



Shakertown

Shakertown introduces its Craftsman Shingle Panel. Made from Western Red Cedar, the one-course panels feature concealed nailing and overlocking end joints for easy installation and a seamless appearance. Craftsman Shingle Panels are manufactured 8-ft.-long and available with a choice of 4-1/2-in., 7-in., and 14-in. exposures. Choose from natural, primed white or prefinished with a semi-transparent oil stain in Pasadena Green, Beach Grey, Redwood or Natural Beige.

800-426-8970
www.shakertown.com
AIA booth 3079

Circle Reader Service #163

Fire-Rated Aluminum Doors & Windows

8 Doors & windows



Aluflam

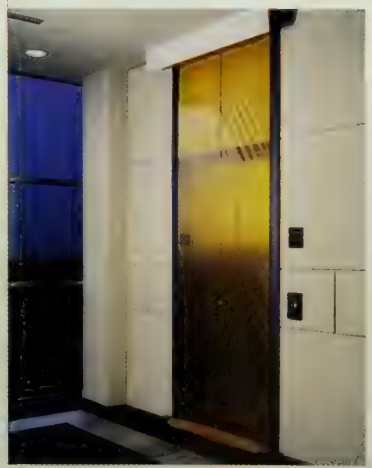
Imagine being able to specify a fire-rated system that blends in so well with non-rated materials that you virtually can't tell them apart. Imagine the clean, rich lines of true extruded aluminum frames and large panels of clear glass. With ALUFLAM framing and VETROTECH SAINT-GOBAIN glass, this is reality. Contact them for further information. Fax number 714-899-3993 Email info@aluflam-usa.com

714-899-3990
www.aluflam-usa.com

Circle Reader Service #166

Smoke Control for Elevator Hoistways

7 Thermal & moisture protection



Smoke Guard, Division of RectorSeal

Designed with medical, hospitality and multi-story residential applications in mind, the Smoke Guard® System is an aesthetically pleasing, space-saving alternative to traditional applications. Concealed in the ceiling or a valance, it deploys only when smoke is detected at the hoistway. The Smoke Guard System returns usable space to the owner on every floor, creating valuable space in your design. The deployed system forms a smoke- and draft-control assembly at the elevator hoistway door as required by the International Building Code (IBC).

800-574-0330
www.smokeguard.com
AIA booth 2479

Circle Reader Service #164

Barn Door Hardware

8 Doors & windows



Crown Industrial

Crown Industrial provides a complete line of barn door hardware. Hardware includes sliding door track and trolleys, 'horse fooler' latches, cremone bolts, strap hinges and folding door hardware. Sliding door hardware comes in either 'box' or 'flat' track styles. (Flat track shown.) The trolley rides on top of a 1/4-in.-thick flat bar track. Various finishes, styles and sizes are available. Products used for barns, wineries, lofts, offices, restaurants, residential and commercial applications.

650-952-5150
www.crown-industrial.com

Circle Reader Service #167

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASP

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Glass Staircases

8 Doors & windows



Nathan Allan Glass Studios, Inc.

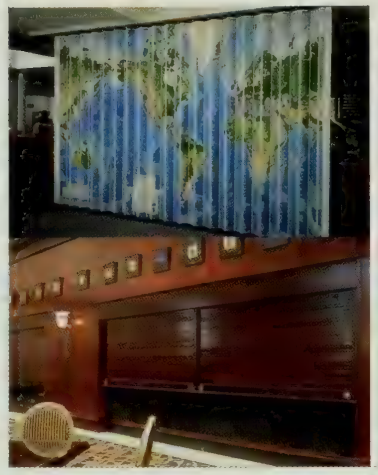
A spectacular four-story corporate staircase project! 80 treads and 20 landings, using Cast Glass "Checkerplate" textures (Diamondplate), with two layers of 5/8-in.-thick tempered glass. The walking surface has an exclusive "Glass Sandpaper" safety finish. The finished product is engineered. Big D Construc-tion, Corporate Headquarters—Salt Lake City, UT.

www.nathanallan.com
AIA booth 467

Circle Reader Service #168

Doors for Interior Architecture

8 Doors & windows



Woodfold-Marco Mfg., Inc.

Some will say that nothing is more beautiful than wood. Woodfold-Marco would agree. Woodfold custom made accordion and roll-up doors (available in hardwood and non-hardwood finishes as well) are both functional and beautiful. Woodfold-Marco has models available for use as sight, security and acoustic applications. Its solid hardwood roll-up doors coil conveniently overhead. And to assure on time completion of your projects, Woodfold-Marco has the industry's best production cycle. Fax number 503-357-7185

503-357-7181
www.woodfold.com
AIA booth 3132

Circle Reader Service #171

Fire-Rated Frames

8 Doors & windows



Technical Glass Products

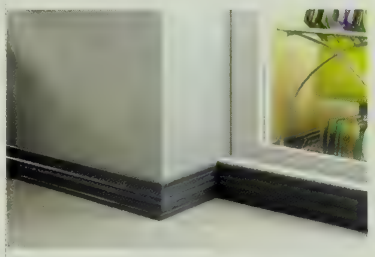
Technical Glass Products' Fireframes Hardwood Series provides an attractive fire-rated framing alternative for individual glass lites in sizes up to 31-sq.-ft. The Hardwood Series features an engineered core for dimensional stability and a thick hardwood face for unmatched beauty. The frames are available in a variety of wood species and come in complete packages for easy installation. Hardwood Series frames are available with fire ratings from 20 to 60 minutes.

888-397-3473
www.fireglass.com
AIA booth 1259

Circle Reader Service #169

Rubber Finishing Border System

9 Finishes



Johnsonite

Johnsonite® Bolsters rePLACE® Demounting Finishing Borders System™: Company adds three profiles to first reusable, replaceable and recyclable wall base. Johnsonite, the leader in providing flooring solutions that contribute to the creation of high performance environments, is showcasing the addition of new profiles to its rePLACE® product line. rePLACE is a patented rubber finishing borders system that hangs on a track, enabling it to be easily reused, replaced or recycled. The new profiles enhance the architectural design of this unique and innovative finishing borders system. Email rtipton@johnsonite.com

800-899-8916
www.johnsonite.com

Circle Reader Service #172

Wired Glass

8 Doors & windows



Technical Glass Products

Technical Glass Products introduces Pilkington Pyroshield™ Plus—a new breed of wired glass that offers impact safety in addition to fire protection. Pilkington Pyroshield™ Plus is formed by laminating traditional wired glass with a special interlayer to another layer of clear glass. This gives it the strength to meet the impact safety standard of CPSC 16CFR1201 (Category I), without depending on a surface-applied film. It carries fire ratings up to 90 minutes in doors and up to 45 minutes in other applications.

888-397-3473
www.fireglass.com

Circle Reader Service #170

Decorative Wall Panels

9 Finishes



Kemlite Company

frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture resistant frp panel with a decorative finish that include a myriad of colors, patterns and woodgrains as well as a tile look panel. Available with over 500 hundred choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the Web.

888-332-6377
www.frpdesignsolutions.com
AIA booth 655

Circle Reader Service #173

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Cork & Linoleum Floating Floors

9 Finishes



Nova Distinctive Floors

Nova Cork and Linoleum Floating Floors embrace design, function and environmental consciousness. In 1-in. by 3-in. 'klick' (glueless) system planks, Nova Distinctive Floors' 2005 line boasts 28 designer patterns in cork and the bold 9 linoleum colors with accent tiles. Harvested from forests that meet environmental, social and economic standards, Nova Cork, Linoleum, and Underlayment products have received the "Green Spec" distinction from Building Green, Inc as well as FSC and SCS certifications and offer a 20-year residential and 10-year commercial warranty.

866-576-2458
www.novafloorings.com
AIA booth 1384

Circle Reader Service #174

Canyon Tone Stains

9 Finishes



United Coatings

The Las Vegas Monorail required integration of precast elements for a multiple-phase construction project. Components from several casting yards came together with uniform color thanks to coatings from a single supplier. In some cases components were coated as much as a year apart and showed no visible differences. Canyon Tone Stain from United Coatings was specified for its performance and durability as well as color consistency. For more information on Canyon Tone Stain call United Coatings at (800) 541-4383 or visit us online at www.canyontonestain.com.

800-541-4383
www.canyontonestain.com

Circle Reader Service #177

Noise Barrier Systems

9 Finishes



QUILITE Noise Barriers

The patented QUILITE® Noise Barrier System reduces noise by 60% to 80%. It is a factory-assembled panel system of clear polycarbonate blocks enclosed in noise-trapping bezels and mounted in a high strength steel frame. QUILITE® is also resistant to graffiti. QUILITE® panels are 5-in.-thick, available in modular sizes to produce walls over 30-ft.-high. QUILITE®'s light weight of 6-lb. psf permits easy handling. See their product display at the New Product & Technology Center in the AIA Show.

310-641-7701
www.quilite.com

Circle Reader Service #175

Porcelain Floor Tiles

9 Finishes



Viva Ceramica

VIVA LIMITED EDITION is a new collection of floor coverings with exclusive distribution. The collection includes MAXI floor tiles: 12mm glazed, color-through, very large sized porcelain tile with graphics reminiscent of wood.

www.cerviva.it

Circle Reader Service #178

Bamboo Flooring, Panels & Veneers

9 Finishes



Teragren LLC

Teragren, formerly TimberGrass, introduces SIGNATURE COLORS—Espresso, Cherry, Walnut and Charcoal. The water-based stains are applied to the flat grain natural bamboo planks to maximize durability. The 5-coat German prefinish applied to the stains is water-based, solvent-free and non-off-gassing which meets the company's mission to build a company that is environmentally, socially and economically responsible®. All Teragren bamboo products qualify for LEED™ and are ideal for both commercial and residential applications.

800-929-6333
www.teragren.com

Circle Reader Service #176

Guaranteed Effective Silent Outdoor Bird Control

10 Specialties



Bird Barrier America

Ultrason X is the first-ever ultrasonic bird repeller for exterior use. This eliminates the need for an enclosed area for the sounds to reverberate. Unique 'silent to humans' harassments attack pest birds to leave for good, yet it's harmless to the birds, the environment and your building. Ultrason X targets pest birds with ultrasonic waves that move from speaker to speaker, giving a constant, menacing, multi-bird defense. The powerful 'Surround sound' directional speakers offer greatest all-around flexibility. Also offered is a full Bird Control product line.

310-527-8000
www.birdbarrier.com

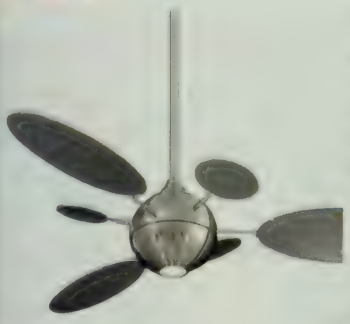
Circle Reader Service #179

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Ceiling Fans

10 Specialties



G Squared

Enjoy art. The Cirque ceiling fan, a high performance dynamic sculpture is a Good Design Award winner. View silver and mahogany blade versions on their Web site. Includes a 50 W dimmable light and touch control system, and a remote control is available. Whisper quiet, powerful, and beautifully made, this timeless design can be used on 8-ft. ceilings or on cathedral ceilings with optional downrods up to 6-ft. long. It is also suitable for sloped ceilings. Lifetime warranty. To buy high-design architectural fans and lighting, please visit G Squared's Web site or call G Squared.

805-595-2392
www.g2art.com

Circle Reader Service #180

Access Floors

10 Specialties



Steelcase

Effectively routing wiring and HVAC systems, access floors are easier to change and more flexible and cost-effective than traditional buildings. Pathways Access Floor installs on top of the concrete slab creating cavities to run wiring and HVAC. Pathways Low-Profile Floor is ideal for renovations of buildings with established ceiling heights. It is 2-1/2-in. high, yet provides 2-in. of clearance to manage communications cabling and power distribution.

www.steelcase.com

Circle Reader Service #181

Curved Church Pews

12 Furnishings



New Holland Church Furniture

Curved pews are "Round For A Reason"™ and are designed and manufactured by New Holland Church Furniture. Curved pews are designed for maximum seating, curved for efficient use of space, designed to enhance worship, created for community, uniting the family of God. New Holland Church Furniture is a certified member of the Architectural Woodwork Institute (AWI), so you can be assured of the very highest quality. Email nhcw@newhollandwood.com

800-220-1465
www.newhollandwood.com

Circle Reader Service #182

Custom Stainless Steel & Copper Bath Fixtures

13 Special construction



Diamond Spas, Inc.

Diamond Spas specializes in metal plumbing fabrication. The DSI line consists of soaking baths, whirlpool baths, Japanese baths, shower pans, lavatories, kitchen sinks and spas/hot tubs. What sets Diamond Spas apart from other manufacturers is their ability to customize. Every bath fixture of spa is designed and built specifically for the client. Your visions become reality when Diamond Spas is part of your project. DSI has the talent and expertise to create artistic, sophisticated, highly durable products for the upscale home.

www.diamondspas.com

Circle Reader Service #183

Saunas

13 Special construction



Finlandia Sauna Products, Inc.

Finlandia Sauna has manufactured exclusive and authentic saunas since 1964. Finlandia offers precut sauna packages and modular sauna rooms as an affordable luxury that can be included in any remodel or new construction. The company markets four all-clear western softwoods and is the only manufacturer to use 1-in. by 4-in. paneling, instead of the cheaper 1/2-in. by 4-in. material used by others. Finlandia's packages include all room parts, a choice of a Finnish made electric heater, a prehung door with choice of glass, and all necessary accessories.

800-354-3342
www.finlandiasauna.com

Circle Reader Service #184

Elevator Door Facings

14 Conveying systems



Gage Corporation, Intl.

ECO-NOR offers six distinctive pre-decorated elevator door facings in 18-ga. stainless steel. ECO-NOR is competitively priced, making it an ideal choice for remodeling or budget sensitive projects. Finishes of all designs complement existing or new #4 stainless steel frames. ECO-NOR offers prompt lead times without the need for prior specification. ECO-NOR is a product of Northern Engraving Corporation. Fax number 608-269-7622 Email gage@centurytel.net

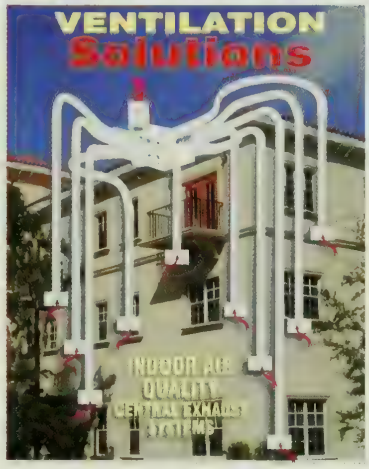
800-786-4243
www.eco-nor.com

Circle Reader Service #185

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Exhaust Ventilation Systems

15 Mechanical



American Aldes Ventilation Corp.

American ALDES manufactures central bath and IAQ exhaust ventilation systems for multifamily housing. Similar to the popular ALDES single-family systems, the energy efficient MPV multiport ventilators prevent mold growth caused by activity based indoor humidity levels. The silent and low continuous background ventilation rates are controlled by the MPV Multi's self-regulating air duct system. This guarantees precise IAQ control and energy efficiency for the owner. Installers appreciate the pre-calibrated and self-balancing feature of the MPV system.

800-255-7749
www.americanaldes.com

Circle Reader Service #186

Innovative Lighting

16 Electrical



Engineered Lighting Products

The "Hole In The Wall" goes small! The newest member of the "HITW" family has a 4-in. by 5-5/8-in. aperture opening. The durable GRG cast housing once installed becomes one with the wall appearing as a custom formed drywall 'light niche.' Available in either LED or low wattage incandescent light sources.

626-579-0943
www.elplighting.com

Circle Reader Service #189

Arts & Crafts Fixtures

16 Electrical



Architectural Area Lighting

Style and grace meet efficiency and versatility in these round and square fixtures. Hoods in stainless steel, copper, opal and mica acrylic, and painted aluminum. Fax number 714-994-0522

714-994-2700
www.aal.net
AIA booth 3655

Circle Reader Service #187

Vapor-Tight Lighting Fixtures

16 Electrical



Luraline Products Company

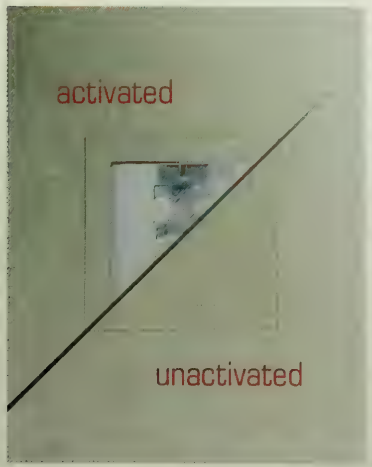
Luraline/VANGUARD SERIES: The Vanguard series of vapor-tight lighting fixtures is ideal for industrial styled interiors and exterior settings requiring extra protection, such as parking lots, walkways, and recreational, educational, institutional and health care applications. Suitable for use in wet locations, all models are fully gasketted to seal against moisture and exposure to the elements, including dust, fumes and insects. The Vanguard series is available in pendant, ceiling and wall-mount configurations, with choice of incandescent, compact fluorescent or H.I.D. lamping.

800-940-6588
www.luraline.com

Circle Reader Service #190

Customized Emergency Lighting

16 Electrical



Concealite Life Safety Products

Artistry and architecture merge when designers incorporate Concealite's 5000 Series into their interiors. The 5000 Series can be customized to fit any interior color or texture. Whether your walls are painted with hard-to-match color, unique wallpaper, rustic wood grains, or a combination, Concealite can customize the frame and panel of each 5000 emergency light to blend into its surroundings and complete the look of your space while still meeting all of the emergency lighting requirements. For more information, please visit their Web site.

www.concealite.com
AIA booth 1988

Circle Reader Service #188

Sign Lights

16 Electrical



Primelite Manufacturing Corp.

These all-aluminum construction Sign Lights can be used indoors or outdoors. Sign Lights are available in incandescent or in energy efficient lighting like Metal Halide, High Pressure Sodium or high wattage PL's. Choose from 22 standard colors or select custom color matching. Arms for the Sign Lights can be fabricated to the customer's own unique design. In addition to Sign Lighting, Primelite carries a full line of prismatic fixtures, cast posts, wood posts, postlights, Cast Aluminum Lanterns, garden lights, street lighting, faux alabaster lighting, Hi hat extenders and blank up kits.

800-327-7583
Primelite-mfg.com

Circle Reader Service #191

McGraw-Hill CONSTRUCTION ENR



ENR 2005 TOP FIRM LEADERS FORUM

Constructing in the 21st Century: New Ways to Think, New Ways to Build

Renaissance Chicago Hotel
Chicago, June 14-15, 2005

verview:

op-level executives from the industry's leading contractors, design firms, quipment and building product manufacturers, and building and facility wners will gather to discuss trends, innovations and business issues. The orum's inter-active panel discussions and networking sessions will allow id encourage attendee participation.

Sponsors:

Constructor

Houlihan Lokey Howard & Zukin

LIMBACH
Since 1901 Consistently Exceeding Expectations

orum Sessions and Participants include:

eynote Speaker:

Barry McCaffrey, **Federal Services, HNTB** (Invited)

ogram Metamanagement: The Next Level

new breed of program management-on-steroids -- ENR calls it program etamanagement -is delivering more predictable costs, improved nsistency of design quality, increased speed, greater agility to enable oject and process improvements across the board, and more. Five Top m Leaders share real examples of program metamanagement in action.

nelists:

Charles Bacon, III, President and CEO, **Limbach Facility Services LLC**

Mike Bellaman, Global Director, **Bovis Lend Lease**

Charles B. Thomsen, Chairman, **3D/I**

Barbara White Bryson, Associate V.P. of Facilities, Engineering and Planning, **Rice University**

Robert C. Workman, Chairman, **BSW International Inc.**

oductivity Improvement:
s Here, It's Real, and It's Up To You

ere now exist hard, replicable productivity-enhancing procedures that you n utilize to improve the productivity and profit of your firm. Find out what me Top Firm Leaders are doing to shatter the myth that construction nnot be "predictably productive."

nelists:

Harvey M. Bernstein, V.P., Industry Analytics & Alliances, **McGraw-Hill Construction**

Greg Clum, Labor Relations Manager, **Black and Veatch**

Brian Foster, Revay and Associates Limited

Mike Kenig, Vice Chairman, **Holder Construction**

e People Side:

Your AEC Workforce Facing Technology-Driven Change

BIM, web-based project collaboration software, ubiquitous mobile communication, and other technology-driven change are yielding profound shifts in the way people relate to each other within our firms and across our industry. Learn how to help everyone involved cope with the transition to the future.

Panelists:

- **Tom Garrett**, CIO, **Brasfield & Gorrie LLC**
- **Ben Fergus**, CIO, **CH2M-Hill**
- **Michelle Kantor**, **MFK Consulting**

Winning Teams!

These panelists' companies are among those that moved up the most in their respective ENR "Top" list over the past two years. What did they do to achieve this kind of upward mobility? Be part of this open conversation with Top Firm Leaders.

Panelists:

- **Tom Wening**, Executive Vice President, **H.J. Russell & Co.**
- **Glenn De Stigter**, Chairman, President and CEO, **The Weitz Company**

Closing Speaker:

- To be announced

Networking Reception - 5:00 to 6:30 PM, Tuesday, June 14th

Networking Lunch (Optional) - 12:00 , Wednesday, June 15th

For more information or to register, visit the Forum website.
www.construction.com/event/

Call: 212-904-4634 or E-mail: chuck_pinyan@mcgraw-hill.com

nnecting people_projects_products

McGraw-Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications

nd us online at www.construction.com

4/05

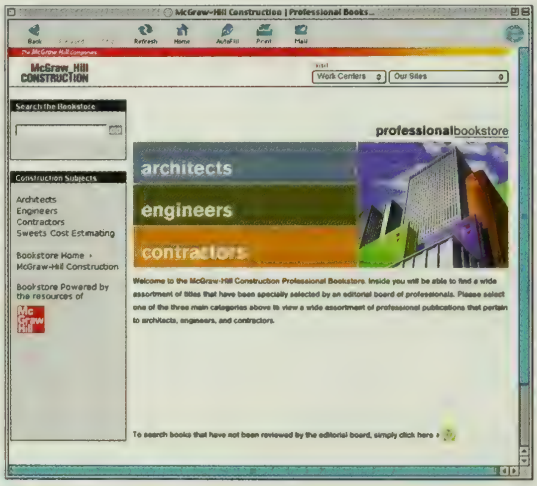
The McGraw-Hill Companies

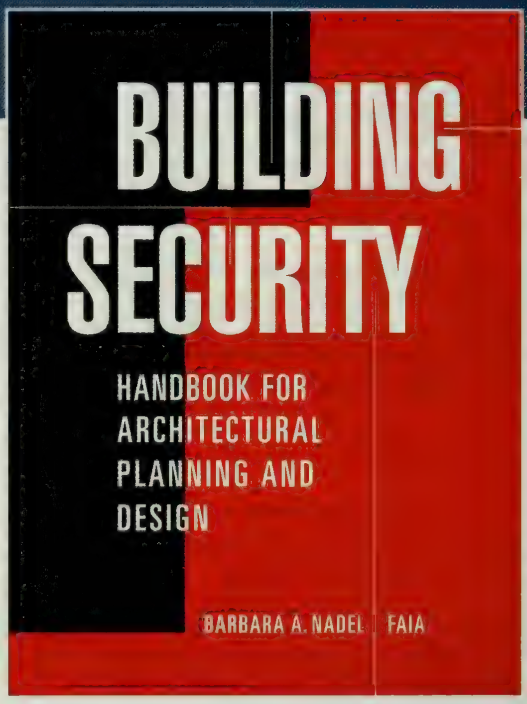
Available through the
McGraw-Hill Construction Bookstore

Building Security
Handbook for Architectural Planning and Design
Barbara A. Nadel, FAIA

"This book is a must-read for architects, landlords, security consultants, and anyone else interested in ensuring security and averting catastrophic loss"
–**Bernard B. Kerik**, Former Police Commissioner of NYC

Whether planning for new construction, renovations, or security upgrades of existing facilities, this is THE definitive 21st Century reference on security, design, technology, building operations, and disaster planning. Generously illustrated with 600 photos, drawings, tables, and checklists, ***Building Security*** addresses protection from terrorism, natural disasters, chemical and biological agents, crime, and workplace violence.





2004 • ISBN: 0-07-1411712
672 pages • 600 illustrations • Hardcover

McGraw-Hill Construction Bookstore Price: $71.96

TO ORDER OR TO SEE OTHER GREAT TITLES, VISIT
www.books.construction.com

www.books.construction.com

At www.books.construction.com, you can choose from a wide selection of titles in architecture, construction, and engineering – from the brightest, most respected minds in the field. Our comprehensive online bookstore offers a special **20% discount, free shipping**, unparalleled customer service, and a host of other great features.

construction success starts with the
construction.com bookstore

McGraw-Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications

Find us online at www.construction.com

connecting people_projects_products

The McGraw-Hill Companies

TO ADVERTISE: Contact Diane Soister
T: (212) 904-2021 / F: (212) 904-2074
Diane_Soister@McGraw-Hill.com

POSITIONS AVAILABLE

WWW.SMPSCAREERCENTER.ORG

Find marketing/BD professionals with A/E/C exper. Call 800-292-7677, ext. 231.

NETWORK ADMINISTRATOR

Dsgn & maintain ntwk sys for architecture firm. Req'd: MS in CS, 1 yr. exp.Resumes: Michael Kang Architect PLLC, 37-01 Main Street, Ste 3A, Flushing, NY 11354. Attn: M. Kang.

ARCHITECTURAL DRAFTER

Cal-City Construction. Must have B.S. in Architectural Engg or related field. Send resume: Cal-City Construction, Attn: Michelle Son, 16300 Downey Ave, Paramount, CA, 90723.

ARCHITECT LEV I

Wanted by NY based construction firm in Woodside, NY. Must have a Bachelor Degree in Architect or Architectural Engineering. Must speak, read and write Korean. Apply to: Bando Construction, Inc., 39-39 63rd St., Woodside, NY 11377.

STAFF ARCHITECT

For Miami Architecture firm. Under the supervision of licensed Architect will research, plan, design & administer building projects for healthcare facilities applying knowledge of designs, construction procedures, zoning & building materials. Administer construction contracts. Conduct periodic on site visits to monitor compliance with plans. Deg & exp. req'd. Send resume to: Bermello-Ajamil & Partners, 2601 S. Bayshore Dr., Miami, Fl 33133.

ARCHITECTURAL CONSULTANT

Utilizing Photoshop, 3D Max & Autocad. Resume to: Lee & Sakahara Architects AIA, Inc., 16842 Von Karman Ave, #300, Irvine, CA 92606 or Fax (949) 261-1144

INTERIOR DESIGNER

For commercial construction. Resume to: The Retail Element, 553 S. Oak Knoll, Pasadena, CA 91101 or fax 626-229-1904.

PROJECT ARCHITECT

Assist the Principal Architect in preparing information regarding design, structure specifications, materials, estimated costs, and construction time for both commercial and residential projects. Send resume to IRM Architects & Construction Managers, Attn: Hugo Bazan, 4308 Ellers Avenue, Austin, TX 78751.

ARCHITECT - (FAR ROCKAWAY)

Draw site plans & design in artistic & structural manner for new & existing residential & commercial structures such as office complexes, school in accordance with zoning regulations & building codes/ Also must be able to create plumbing drawings and risers. Be able to use photoshop 3D images. Have knowledge of estimating. 2 yrs. Experience, B. of architecture, 40 hrs/wk, Mon - Fri 9am - 5pm, Fax resume to: W. Gorman @ (212) 725-3690.

ARCHITECTS - ALL LEVELS / ALL SPECIALTIES

JR Walters Resources, Inc. specializing in the placement of technical professionals in the A&E field. Openings nationwide. Address: P.O. Box 617, St. Joseph, MI 49085 Tel: 269-925-3940 E-mail: jrwawa@jrwalters.com VISIT our web site at www.jrwalters.com

BUSINESS OPPORTUNITY

21-YEAR ARCHITECTURAL FIRM

With on-going "80% repeat clientele" for past 15 years. Owners nearing retirement & seeking smooth transition for its educational, public, industrial, institutional clientele. P.O. Box 5358, Scottsdale, AZ 85261-5358.

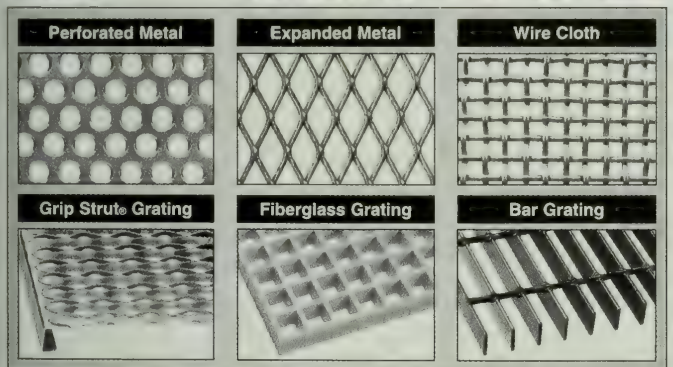
SPECIAL SERVICES



archrecord.construction.com

Same Day Stock Shipment

Hole Products



Custom Fabrication to Your Specs!

Complete **Hole Product** inventories are available from Service Centers coast to coast in a variety of styles, sizes and materials.

The Hole Story®
ISO 9001:2000 Certified

Our website has complete product specifications, load tables, drawings, photographs and more.
www.mcnichols.com

1-800-237-3820

McNICHOLS CO.
e-mail: sales@mcnichols.com
www.mcnichols.com

Member Metals Service Center Institute

CIRCLE 352 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CONTINUING EDUCATION FOR ARCHITECTS



POSITIVE PRESSURE CLASS

AIA Registered Provider

On-Site Training Available

One (1) Hour Long Class = AIA/CES Learning Unit Hour



1.800.283.9988

www.pemko.com

PEMKO

Corporate Office
P.O. Box 3780
Ventura, CA 93006

AIA Show - Las Vegas, NV
Booth #4859
PCBC Show - San Francisco, CA
Booth #2434

Contact Anjella (x266) today for more information or to schedule training classes!

CIRCLE 353 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

379	342		3form *3-form.com*
66	*44*		Academy of Art University *academyart.edu*
304	*130*		Adams Rite Manufacturing Co *adamsrite.com*
352	*312*	S	Advance Lifts *advancelifts.com*
338, 350			AIA *aia.org*
372			AIA *aia.org*
114	*85*	S	Alcan Composites USA Inc *alucobond.com*
148	*95*	S	Alcoa Architectural Products *alcoacladdingsystems.com*
333	*142*		Alkco *alkco.com*
349	*310*		APA: The Engineered Wood Assn *glulambeams.org*
352	*313*		Arakawa Hanging Systems *arakawagrip.com*
330	*141*		Architectural Area Lighting *aal.net*
335	*144*		Architectural Details *arch-details.com*
353	*314*	S	Architectural Precast Association *archprecast.org*
40			Architectural Record *archrecord.construction.com*
31	*16*		Architectural Woodwork Institute *awinet.org*
98	*72*		Associated Builders & Contractors Inc *abc.org*
332	*363*		Ardee *ardeelighting.com*
12			Autodesk *autodesk.com*
363	*324*		Autodessys *formz.com*
32	*17*		Avonite *avonite.com*
339	*301*		Axium *axiumae.com*
33	*18*		B-K Lighting *bklighting.com*
59	*149*		BEGA *bega-us.com*
305	*131*	S	Belden Brick Company, The *beldenbrick.com*
70	*48*	S	Bendheim *bendheim.com*
113	*84*		Blanco *blancoamerica.com*
368			BNi Building News *bnibooks.com*
231	*109*		Boyd Lighting *lightspaceboyd.com*
47	*29*	S	BR 111 *BR111.com*
96	*70*	S	Bradley Corporation *bradleycorp.com*
307	*133*		Brew Express *brewexpress.com*
92	*67*		Building Systems Design *bsdsoftlink.com*
15, 105	*38, 78*	S	C/S Group *c-sgroup.com*
23	*11*	S	Cambridge Architectural Mesh *architecturalmesh.com*
80	*58*	S	Canterbury International *canterburyintl.com*
78	*56*	S	Carl Stahl Décor Cable *decorcable.com*
112E	*359*		Carvart *carvart.com*
376			Cascade Coil Drapery *cascadecoil.com*
259	*116*		Cedar Shake & Shingle Bureau *cedarbureau.org*
39	*24*	S	Ceilings Plus *ceilingsplus.com*
48	*30*	S	CENTRIA Architectural Systems *centria.com*
76	*54*	S	CertainTeed *certainteed.com*
342	*303*		Chicago Architecture Foundation *architecture.org*
306	*132*	S	CHMI *chmiarch.com*
24	*12*		CNA/Victor O Schinnerer & Co Inc *schinnerer.com*
67	*45*		Colorker *colorker.com*
325	*139*		Cooper Lighting *cooperlighting.com*
373	*333*	S	Copper Sales Inc *unaclad.com*
45	*27*	S	Cornell Iron Works *cornelliron.com*
344	*305*	S	CPI International *cpidaylighting.com*
256	*113*	S	CR Laurence Co Inc *crlaurence.com*
255	*112*		CSi Metal Dek Group *metaldek.com*
257	*114*		Custom Building Products *custombuildingproducts.com*
90	*66*		Dacor *dacor.com*
100	*74*	S	DaVinci Roofscapes *davinciroofscapes.com*
346	*307*		Dawson Doors *dawsondoors.com*
cov3			Dell *dell.com*
335	*146*		Delray Lighting Incorporated *delraylighting.com*
376	*336*		Doug Mockett & Company Inc *mockett.com*
381	*347*		Doug Mockett & Company Inc *mockett.com*
343	*304*	S	Dryvit *dryvit.com*
89	*65*	S	DuPont Tyvek *tyvek.com*
112B	*357*	S	E Dillon & Company *edillon.com*
139	*91*	S	Eagle Windows & Doors *eaglewindow.com*
72	*50*	S	Easi-Set Industries *easiset.com*
150	*96*	S	EFCO Corporation *efcocorp.com*
41-43	*25*	S	Eldorado Stone *eldoradostone.com*
56, 57	*35, 36*	S	Ellison Bronze *ellison-bronze.com*
340	*302*		Energy Steel Products *energysteelproducts.com*
102	*75*		Engineered Lighting Products *elplighting.com*
357	*318*	S	Englert *englertinc.com*
35	*20*	S	EPIC Metals Corporation *epicmetals.com*
37	*22*	S	FabriTec Structures *fabritecstructures.com*
127	*88*	S	Ferrari Textiles Corporation *soltis-textiles.com*
155	*97*	S	Follansbee Steel *follansbeeroofing.com*
318-319	*137*		Gardco Lighting *sitelighting.com*
129	*89*	S	Ginger *motiv.us*
184	*102*		Graboplan *graboplan.us*
60	*39*		Greenscreen *greenscreen.com*
75	*53*		Gres de Aragon *gresaragon.com*
380	*344*	S	Hafele *hafeleonline.com*
369	*330*		Harmonic Environments *harmonicenvironments.com*
cov4	*355*	S	Haworth *haworth.com*
46	*28*		HDR *hdrinc.com*
267	*119*	S	High Concrete Structures Inc *highconcrete.com*
381	*346*		Historical Arts & Casting Inc *historicalarts.com*
348	*309*	S	Huntco *huntco.com*
cov2-1	*147*	S	Hunter Douglas Architectural Prods *hunterdouglas.com*
175	*101*		HY-Lite *hy-lite.com*
160	*98*		IGT Glass *glastroesch.ch*
283	*128*	S	illbruck *illbruck-archprod.com*
355	*316*	S	Inclinator Co of America *inclinator.com*
26-27	*13*	S	InterEdge Technologies *firesafe-glass.com*
351	*311*		International Code Council *iccsafe.org*
380	*345*		International Code Council *iccsafe.org*
378	*338*	S	Invisible Structures Inc *invisiblestructures.com*
134	*365*		Invision/J&J Industries *invisioncarpet.com*
371	*332*		Italian Trade Commission *marblefromitaly.com*
332	*363, 364*		JJI Lighting Group *jjilightinggroup.com*
333	*142*		JJI Lighting Group *jjilightinggroup.com*
378	*339*		Joel Berman Glass Studios *jbermanglass.com*
65	*43*		Johnson Controls *johnsoncontrols.com*
258	*115*	S	Johnsonite *johnsonite.com*
199	*105*	S	Julius Blum & Co Inc *juliusblum.com*
106	*79*	S	Kalwall *kalwall.com*
61		S	Kawneer Company Inc *kawneer.com*
382	*348*		Kenyon *kenyonappliances.com*
198	*104*		Kepco+ Incorporated *kepcoplus.com*
85	*61*		Kim Lighting *kimlighting.com*
364	*325*	S	Kingsley-Bate *kingsleybate.com*
201	*107*	S	Knauf *knauffiberglass.com*
385	*351*		Koreteck *koreteck.com*
136, 358	*90, 319*		KraftMaid Cabinetry *kraftmaid.com*
62	*40*	S	Kusser Aicha Graniteworks USA *kusserUSA.com*
104	*77*		Kwalu *kwalu.com*
112G	*361*	S	Lafarge North America *lafargenorthamerica.com*
332	*364*		LAM *lamlighting.com*
64	*42*	S	landscapeforms *landscapeforms.com*
359	*320*		@Last Software *sketchup.com*
375	*335*	S	Laticrete International Inc *laticrete.com*
200	*106*		Lehigh Portland Cement Compan *lehighcement.com*
334	*143*		LightingUniverse.com *lightinguniverse.com*
314	*136*		Lightolier *lightolier.com*
323	*138*		LiteTouch *litetouch.com*
10-11	*6*		Loewen *loewen.com*
185	*103*	S	Lonseal *lonseal.com*
93	*68*		Lucifer Lighting Company *luciferlighting.com*
329	*140*		Lumec & Lumec Scheder *seegreatshapes1.com*
71	*49*	S	Lutron *lutron.com*
312-313	*135*	S	Lutron *lutron.com*
382	*349*	S	Major Industries *majorskylights.com*
74	*52*		Manning Lighting *manningltg.com*
174	*100*		Marble Institute of America Inc, T *marble-institute.com*
94	*69*		Marshfield DoorSystems *marshfielddoors.com*
20-21	*9*		Marvin Windows & Doors *marvin.com*
370	*331*		Marvin Windows & Doors *marvin.com*
87	*63*	S	MBCI *mbci.com*

For additional information on these advertisers, circle corresponding number on Reader Service Card, or go to archrecord.construction.com/products.
To reserve your 2005 Sweets call 1 800-442-2258

112D, 384			McGraw-Hill Construction construction.com
393, 394			McGraw-Hill Construction construction.com
395	352	S	McNichols Co mcnichols.com
365	326	S	MechoShade Systems Inc mechoshade.com
88	64		Metal Construction Association metalconstruction.org
269	120		Mitsubishi Chemical America Inc alpolic-usa.com
377	337		Modern Fan Co, The modernfan.com
233	110	S	Monier Lifetile monierlifetile.com
112	83	S	Mortar Net mortarnet.com
232			Móz Metal Laminates mozdesigns.com
370			National Building Museum nbm.org
260	117	S	National Gypsum Company nationalgypsum.com
230	108	S	National Terrazzo & Mosaic Assn ntma.com
368	329	S	Nixalite of America nixalite.com
112C	358		NJ SmartStart Buildings njsmartstartbuildings.com
16-17	7	S	Oldcastle Glass oldcastleglass.com
38	23		Olympic Panel Products olympicpanelproducts.com
282	127	S	Overly Door Company overly.com
6-7, 265	4, 118	S	Owens Corning owenscorning.com
265	118	S	Owens Corning owenscorning.com
383	350	S	P&P Artec artec-rail.com
356	317	S	Pawling pawling.com
292	129	S	Pella Windows & Doors pella.com
293-297	367	S	Pella Windows & Doors pella.com
395	353	S	Pemko pemko.com
279	125	S	Petersen Aluminum pac-clad.com
112A	356	S	PGT Industries pgtindustries.com
277	124	S	Pilkington pilkington.com
4	2		Pine Hall Brick Co Inc pinehallbrick.com
280	126	S	Pittsburgh Corning pittsburghcorning.com
97	71	S	Porcelanosa porcelanosa-usa.com
73	51		Powder Coating Institute, The powdercoating.org/101
8-9	5	S	PPG ppgglass.com
141	92	S	PPG (Pittsburgh Paints) pittsburghpaints.com
374	334		Promosedia promosedia.it
310-311	134		Prudential Lighting prulite.com
58	37		Quilite Noise Barriers quilite.com
379	341		Rafael Vinoly Architects rvatr.com
379	340	S	Rakks rakks.com
275	123		RHEINZINK rheinzink.com
345	306		Robinson Brick Company robinsonbrick.com
107	80		Roca rocatile.com
161	99		Rocky Mountain Hardware rockymountainhardware.com
69	47		ROHL rohlhome.com
336	300	S	SAFTI/O'Keeffes Inc safti.com
103	76		Samsung Staron getstaron.com
82	60		Samsung-Digital Info Tech Div samsungproav.com
63	41	S	Schindler us.schindler.com
234	111	S	Schott Corporation us.schott.com
22	10	S	Schott Corporation us.schott.com
68	46		Schuler Shook schulershook.com
77	55	S	Sherwin-Williams sherwin-williams.com
124	87	S	Simpson Strong-Tie Company Inc simpsonstrongwall.com
362	323		Skyline Design skydesign.com
379	343		Slip Tech sliptech.com
99	73	S	Sloan Valve Company sloanvalve.com
284-291	366	S	Sloan Valve Company sloanvalve.com
354	315	S	Smoke Guard smokeguard.com
54, 55	33, 34		Steelcase steelcase.com
347	308		Steelscape steelscape-inc.com
145	94	S	Sto Corp stocorp.com
366	327		Stone River Bronze stoneriverbronze.com
360	321		Sun Valley Bronze svbronze.com
143	93		Sunbrella brand fabrics sunbrella.com
298-303			Sweets sweets.construction.com
361	322	S	Taiyo Birdair taiyobirdair.com
79	57		TAMKO Roofing Products tamarite.com
5	3		Technical Glass Products fireglass.com
308	148		TEKA Illumination teka-illumination.com
111	82		Thermador thermador.com
49	31		Tile of Spain spaintiles.info
81	59	S	Timely timelyframes.com
112H	362		Tindall Corp tindallcorp.com
270	121	S	Trespa trespanorthamerica.com
367	328		US Green Building Council usubc.org
52, 53		S	USG Corporation usg.com
50	32		Valli & Valli vallievalli.com
271	122		VERSA-LOK versa-lok.com
44	26	S	Viking Range Corporation vikingrange.com
108	81	S	Viracon viracon.com
122	86		Vistawall Architectural Products vistawall.com
32A-D			VT Industries vtindustries.com
28-29	14		Vulcraft, A Division of Nucor Corp nucor.com
335	145		WAC Lighting waclighting.com
36	21		Walker Zanger walkerzanger.com
112F	360	S	Wasco Skylights wasco1.com
34	19	S	Wausau Window and Wall Systems wausauwindow.com
2-3	1		Weather Shield Windows & Doors weathershield.com
86	62		Westcrowns Inc westcrowns.com
398	354		Western Red Cedar Lumber Assoc realcedar.org
18-19	8		Williams Scotsman williamsscotsman.com
30	15	S	YKK AP America Inc ykkap.com

For additional information on these advertisers, circle corresponding number on Reader Service Card, or go to archrecord.construction.com/products.
To reserve your 2005 Sweets call 1-800-442-2258

SALES OFFICES & CONTACTS

EXECUTIVE OFFICES

James H. McGraw, IV, Group Publisher
(212) 904-4048 Fax: (212) 904-3695
jay_mcgraw@mcgraw-hill.com

Laura Viscusi, VP, Associate Publisher
(212) 904-2518 Fax: (212) 904-2791
lviscusi@mcgraw-hill.com

Assistant: Pina Del Genio
(212) 904-6791 Fax: (212) 904-2791
pina_delgenio@mcgraw-hill.com

ONLINE SALES

Paul Cannella, Director
(312) 233-7499 Fax: (312) 233-7490
paul_cannella@mcgraw-hill.com

CLASSIFIED SALES

Diane Soister
(212) 904-2021 Fax: (212) 904-2074
diane_soister@mcgraw-hill.com

NORTHEAST / MID-ATLANTIC

Janet Kennedy (CT, MA, ME, NH, NJ, NY, PA, RI, VT)
(212) 904-3603 Fax: (212) 904-2791
janet_kennedy@mcgraw-hill.com

Joe Sosnowski (NJ, PA)
(610) 278-7829 Fax: (610) 278-0936
joseph_sosnowski@mcgraw-hill.com

MIDWEST

Mike Gilbert (AR, IL, IA, MN, MO, OH, W.PA, WV)
(312) 233-7401 Fax: (312) 233-7403
mike_gilbert@mcgraw-hill.com

Lisa Nelson (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 233-7402 Fax: (312) 233-7403
lisa_nelson@mcgraw-hill.com

SOUTHEAST / MID-ATLANTIC

Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com

WEST (AZ, CA, CO, NM, NV)

Bill Hague
(253) 858-7575 Fax: (253) 858-7576
(760) 340-5575 Fax: (760) 340-0439
bill_hague@mcgraw-hill.com

WEST (ID, MT, OR, S.CA, UT, WA, WY)

Bill Madden
(503) 224-3799 Fax: (503) 224-3899
bill_madden@mcgraw-hill.com

INTERNATIONAL

Glen Wither (Canada)
(888) 836-6623 Fax: (866) 212-2213
glen_wither@mcgraw-hill.com

Martin Drueke (Germany)
(49) 202-27169-12 Fax: (49) 202-27169-20
drueke@intermediapartners.de

Ferruccio Silvera (Italy)
(39) 022-846716 Fax: (39) 022-893849
ferruccio@silvera.it

Katsuhiro Ishii (Japan)
(03) 5691-3335 Fax: (03) 5691-3336
amskatsu@dream.com

Young-Seoh Chin (Korea)
(822) 481-3411/3 Fax: (822) 481-3414

PRODUCT NEWS SPOTLIGHTS / POSTCARD SERVICE

Deidre Allen
(212) 904-2010 Fax: (609) 426-7136
deidre_allen@mcgraw-hill.com

SUBSCRIBER SERVICE

(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64cs@mcgraw-hill.com

BACK ISSUES

(212) 904-4635
phyllis_moody@mcgraw-hill.com

REPRINT MANAGEMENT SERVICES

(800) 360-5549 x129
architecturalrecord@reprintbuyer.com



CEDAR.

DOESN'T YOUR NEXT PROJECT DESERVE IT?

WHAT SEPARATES STUNNING HOMES FROM THOSE THAT ARE SIMPLY NICE? IMPECCABLE CRAFTSMANSHIP AND THE FINEST MATERIALS. THAT'S WHY SO MANY DISCRIMINATING ARCHITECTS CHOOSE WESTERN RED CEDAR. NOTHING MATCHES THE ELEGANCE AND WARMTH OF CEDAR. IT CONVEYS A MESSAGE OF SOPHISTICATION AND STYLE THAT SETS A HOME APART.

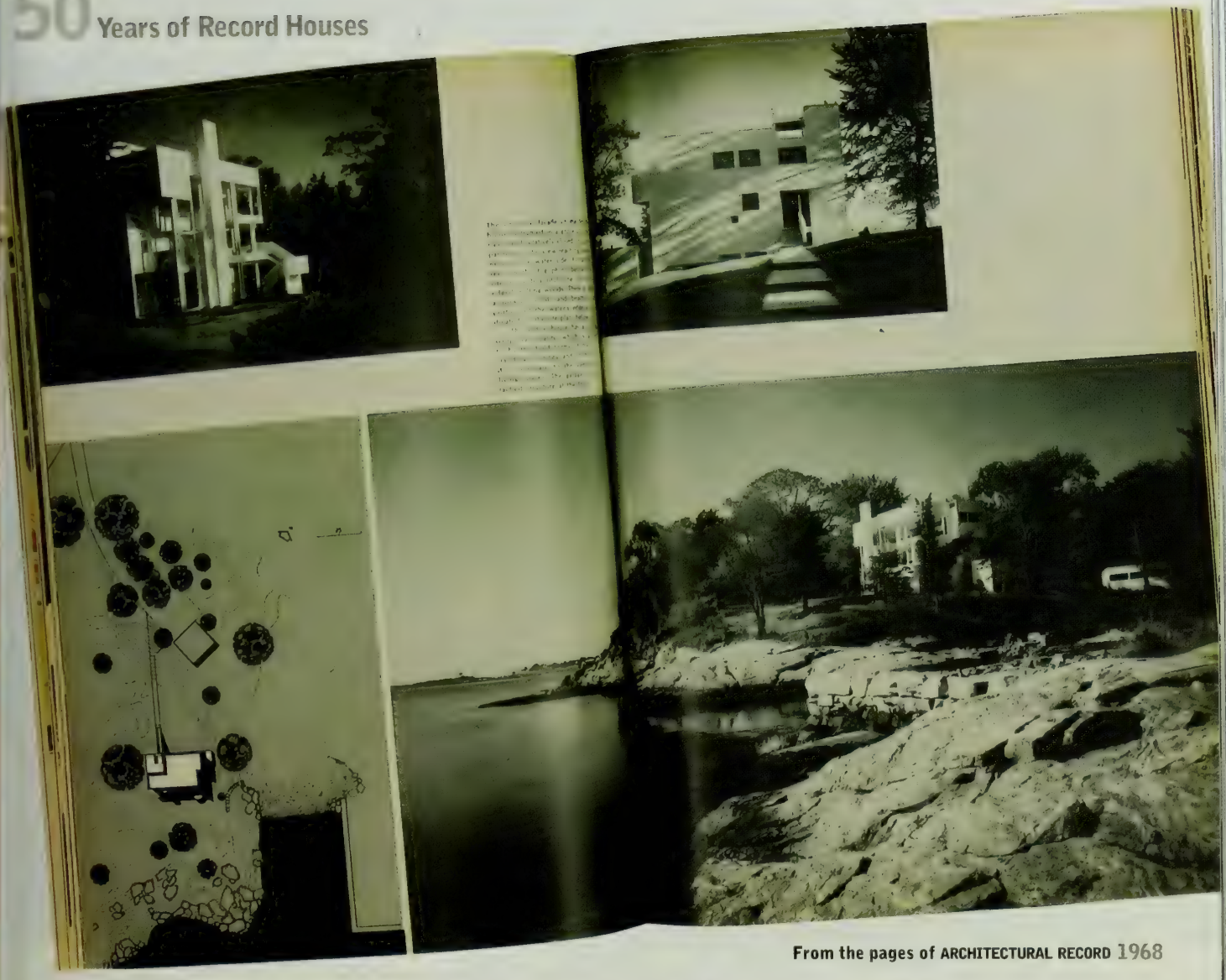
WHEN ONLY THE BEST WILL DO, CHOOSE WESTERN RED CEDAR. YOU AND YOUR PROJECTS DESERVE IT.

WESTERN RED CEDAR LUMBER ASSOCIATION
REALCEDAR

1-866-778-9096

FOR MORE INFORMATION ON CEDAR, VISIT
REALCEDAR.ORG

CIRCLE 354 ON READER SERVICE CARD OR
TO ARCHRECORD.CONSTRUCTION.COM/PRODUC



From the pages of ARCHITECTURAL RECORD 1968

Meier's Milestone Moment

By William Weathersby, Jr.



Set on the craggy coast of Long Island Sound in Darien, Connecticut, Richard Meier's Smith House is a Modernist lighthouse of transparent geometry. Critic Kenneth Frampton called it "a panoramic belvedere overlooking the rocky shoreline," a work of "neopurist" architecture that harked back to the best of Le Corbusier. One of Meier's first major residential projects, the house also represented a turning point in his career.

When he won the commission for it in 1965, the 31-year-old Meier had been running his own firm for two years after apprenticing in the studio of Marcel Breuer. "The Smith House was a seminal project for me," Meier acknowledges today. "It allowed me to articulate some ideas I was starting to pursue, such as the balance between public and private space."

Designed as a weekend retreat for New Yorkers Carole and Fred I. Smith and their two young sons, the house capitalizes on its dramatic 1.5-acre site. Beyond a dense cluster of evergreens, the land clears and rises to the center of the site, then drops sharply to the rugged shoreline and a small, sandy cove. The spatial organization of the house hinges on the program-



This page: **A later addition to the west extended over a bathhouse (to right in photo above). Meier also designed the desk (below).**

Previous page: **The house embraced its waterfront setting in 1968 (top), and is now shaded by towering trees.**



(continued from previous page) matic separation between public and private areas. From the front walkway, visitors approach a mostly opaque white wood facade before crossing a ramp and entering on the house's second level to discover what Meier calls a "180-degree explosion" of light and space. The living room, dining area, and study embrace the waterfront views, pinwheeling in a three-level enclosure of glass on three sides. The family's private quarters, meanwhile, are stacked to hug the street-facing facade of the 2,800-square-foot building.

Elements that would become Meier signatures are present as well: the pristine white exterior, expanses of plate glass framed by finely proportioned piers and mullions, and minimal interiors creating intersecting volumes. When the Smith House was published as the cover story of Record Houses in May 1968, the editors noted that "design impact is produced by the simplest means, with no frills and a remarkable absence of most current architectural clichés."

Soon after the house was completed, the Smiths divorced. When Carole later married Herrick Littlefield, the family decided to make Darien their full-time residence, and Meier was enlisted to expand the house. Completed in 1973, the 300-square-foot addition enlarged the master suite and added closets and support spaces. Today, the Littlefields again enjoy the house as a weekend place, "where the play of light is incredible year-round," Carole says.

"I believe the success of the house lies in the capacity to absorb and enter into a dialogue with the temporal phenomena of light and context," Meier concurs. "They are, in the end, its material." ■

ork without boundaries.
eate without boundaries.





Dell recommends Microsoft® Windows® XP Professional

e® Video Collection Standard
, documentation or
may vary from retail version

oodbye to creative constraints. Dell™ and Adobe® have joined forces to help provide solutions for your creative needs. Dell Precision™ workstations feature the latest processors, loads of memory, and PCI Express™ x16 2-D and 3-D graphics cards, making them powerful enough to handle large graphics files quickly and deliver stunning visual s. Best of all, Adobe has a range of Dell ISV-certified software options, including the new comprehensive Adobe® Video Collection 2.5 Standard. Simple solutions, so all you o do is be creative. **Limited time offers.**

DELL PRECISION™ 470 WORKSTATION

Maximum Performance, Single Processor Workstation
- Intel® Xeon™ Processor (2.80GHz, 1MB Cache, 800MHz FSB)
- Microsoft® Windows® XP Professional
- 1GB Dual-Channel DDR2 SDRAM
- 160GB* (7200 RPM) SATA Hard Drive
- 128MB ATI FireGL™ V3100 PCI Express™ x16 Graphics Card
- 48x CD Burner/DVD Combo Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* On-Site Service,* Tech Support)

$1699 Monitor Not Included
Lease as low as **$45**/mo (48 pmts.*)
E-VALUE Code: 03101-S40516m

Recommended Upgrades:
- 3-Yr Business Essential Service Plan (includes 24x7 On-Site Service,* advanced Tech Support), add $408
- Dell™ UltraSharp™ 1905FP 19" Flat Panel Display, add $499

DELL PRECISION™ M20 WORKSTATION

Workstation Performance, Notebook Mobility
- Featuring Intel® Centrino™ Mobile Technology with Intel® Pentium® M Processor 730 (1.60GHz, 2MB L2 Cache, 533MHz FSB), Intel® PRO/Wireless Card
- Microsoft® Windows® XP Professional
- 14.1" SXGA+ Active Matrix Display
- 512MB DDR2 SDRAM
- 60GB* (5400 RPM) Hard Drive
- ATI Mobility™ FireGL™ V3100 64MB PCI Express™ OpenGL Graphics
- 8x DVD-ROM Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* Tech Support)

$1999 Monitor Not Included
Lease as low as **$53**/mo (48 pmts*)
E-VALUE Code: 03101-S40519m

Recommended Upgrades:
- 80GB* (5400 RPM) Hard Drive, add $80
- 3-Yr Business Standard Service Plan (includes On-Site Service,* CompleteCare™ Accidental Damage Service,* advanced Tech Support), add $278

Dell recommends Adobe® software with Dell Precision™ workstations.

Adobe® Video Collection 2.5 Standard

- Package includes Adobe Premiere® Pro 1.5, Adobe After Effects® 6.5 Standard, Adobe Audition™ 1.5, and Adobe Encore™ DVD 1.5.

Special Offer with Purchase of Select Dell Precision™ Workstations*
Only **$599** Great Value!

[illegible]
Operate with powerful, next-generation digital imaging features that are the professional standard for graphic and web designers, photographers, and video professionals.
$649 SKU A0176740

[illegible]
Add stunning 2D and 3D compositing, animation, and visual effects as well as motion tracking and stabilization to production.
Standard Version
$728 SKU A0369456

[illegible]
Revolutionizes non-linear video editing with real-time tools that provide precise management of virtually every aspect of video and audio editing.
$729 SKU A0356041

FREE 3-5 Day Shipping* with purchase of select business systems. Call or go online for eligible systems.

be

Get more out of creativity. Get more out of now. DELL

CALL 888.691.8169 toll free **CLICK www.dell.com/SMB/DCCsolutions**

F 7a-8p Sat 8a-5p, CT
y/Availability: Pricing, specifications, availability, and terms of offer may change without notice. Taxes, fees and shipping and handling charges, except for free shipping offer, extra, vary and are not subject to discount. May be combined with other select offers or s. U.S. Dell Small Business new purchases only. LIMIT 5 DISCOUNTED OR PROMOTIONAL ITEMS PER CUSTOMER. In case of customers leasing under these promotions, please note that items leased will be subject to applicable end-of-lease options or requirements ot be responsible for pricing or other errors, and reserves the right to cancel orders arising from such errors. **Warranty:** For a copy of our Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One Dell Way, Round Rock, Texas 78682. For more on, visit http://www.dell.com/warranty. **On-Site Service:** Service may be provided by third-party. Technician will be dispatched, if necessary, following phone-based troubleshooting. Subject to parts availability, geographical restrictions and terminal [illegible]. oming dependent upon time of day call placed to Dell. **Leasing:** Monthly payment based on 48-month Fair Market Value ("FMV") QuickLease and does not include taxes, fees and shipping and handling charges. Your monthly payment may vary depending on rthiness. QuickLease arranged by Dell Financial Services L.P. ("DFS"), an independent entity, to qualified Small Business customers. Minimum transaction size of $500 required. At the end of the FMV [illegible] or return the equipment to DFS. Please contact your DFS representative for further details. All terms subject to credit approval and availability, and are subject to change without notice. **CompleteCare Accidental Damage Service:** [illegible] s, and damage due to fire or intentional damage. CompleteCare not available in all states. Customer may be required to return unit to Dell. For complete details, visit www.dell.com/servicecontracts. **Hard Drive:** For hard [illegible] th preloaded material and operating environment and will be less. **Free 3-5 Day Shipping:** Free shipping is lowest cost (3-5 day) shipping. Valid for U.S. Small Business new purchases only. Available in Continental (except Alaska) U.S. only. To qualify for [illegible] purchase thresholds may apply. Call or go online for details. Systems free shipping offers exclude Software and Peripheral (S&P) orders under $59; all S&P orders placed by phone, and S&P orders placed in [illegible] ers purchased in the S&P Online store and/or by phone. Free shipping on S&P does not apply to S&P in the online system configuration pages, but can be combined with other offers. **Trademark/Copyright Notices:** [illegible] Care and Dell Precision are trademarks of Dell Inc. Intel, Intel Centrino, Intel Xeon and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other [illegible] tered ks of Microsoft Corporation in the United States and/or other countries. Adobe, the Adobe Logo and Acrobat are either registered trademarks or trademarks of Adobe [illegible]



HAWORTH®
change by design

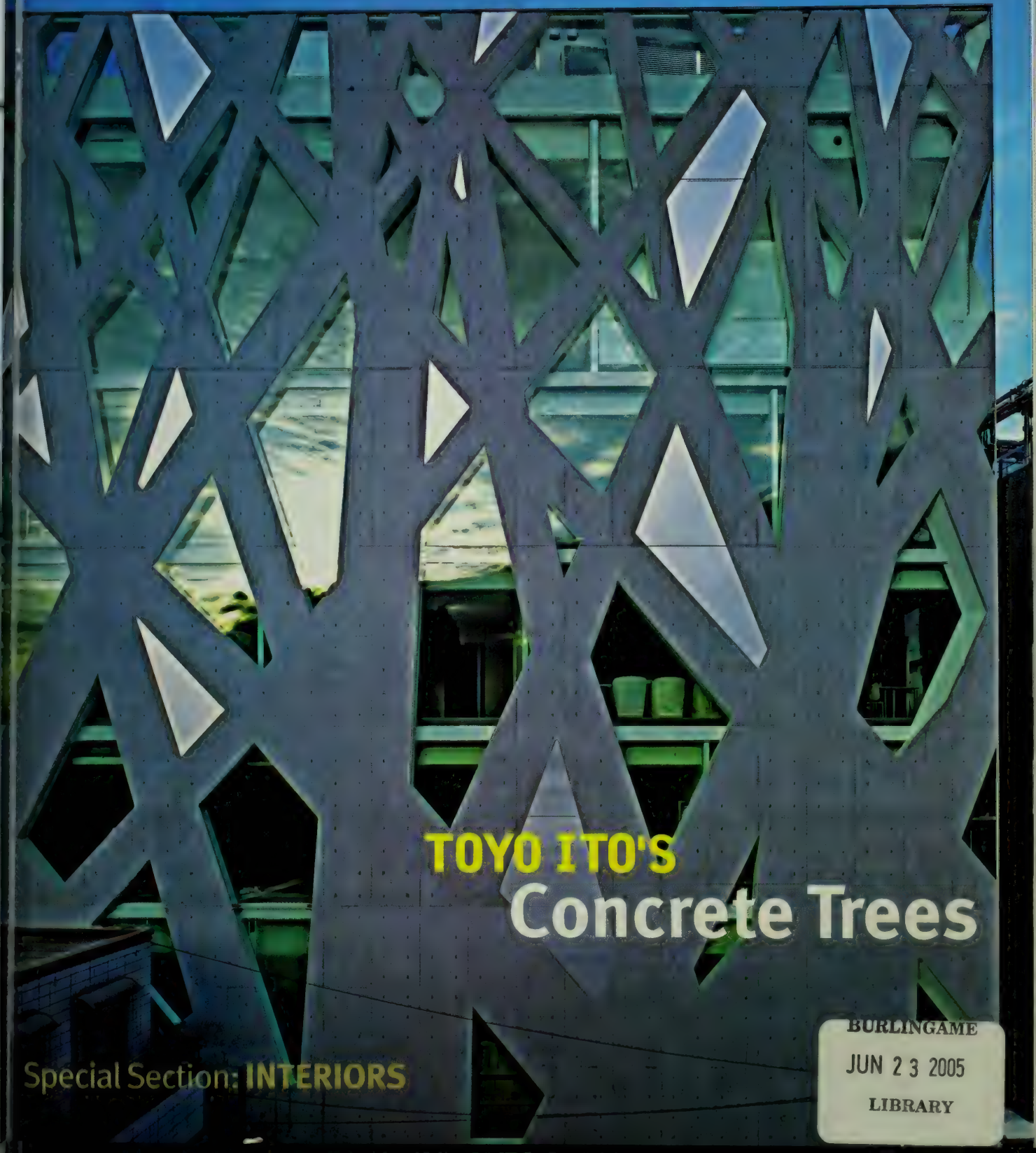
www.haworth.com 866.833.4343

CIRCLE 355 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

itectural Record
5 June

TECTURAL RECORD

BURLINGAME PUBL
06241539 0



TOYO ITO'S Concrete Trees

Special Section: INTERIORS

BURLINGAME
JUN 23 2005
LIBRARY

CEILING | SYSTEMS

[Between us, ideas become reality.™]



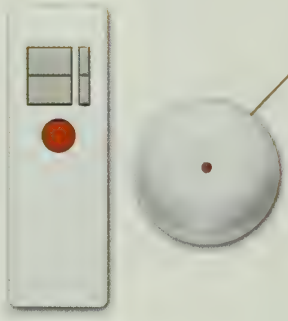
ARMSTRONG

armstrong.com/neocon


inspiration is everywhere
Creative inspiration is what separates the ordinary from the extraordinary. Our latest portfolio of ceiling products includes unconventional shapes, textures and materials designed to inspire. Stop by booth 1094 on the 8th floor at NeoCon and see what's up.
Armstrong
CIRCLE 1 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Light is everything.

Light affects people.
When the light is right, students learn more, employees are more productive, there are fewer health complaints and occupant comfort is increased.



IR hand-held remotes and receivers for personal control

Light is expensive.
Despite the fact that most lighting is energy-efficient, fluorescent lighting is still the primary source of energy consumption in most buildings.



Occupant sensors for energy management

Scalable from 1 to 32,000 fixtures

Light is daylight and electric light.
Both sources should be in harmony to keep people comfortable and productive, address building energy usage, and promote green design.



Photocells for daylight harvesting

Introducing EcoSystem™

Dimming ballasts for
fluorescent lighting

LIGHTFAIR INTERNATIONAL

2005 winner best of category
Award for Ballasts and Transformers



EcoSystem™
Light control that is simple and cost-effective.

Using the same basic components, build a system for a single lighting fixture in a single room, or for thousands of fixtures throughout an entire building.

Sensors and wallstations connect directly to any ballast — without interfaces or powerpacks — and share information with other ballasts throughout the system.

Over the life of the building, change or repurpose the space easily without costly rewiring.

Experience EcoSystem for yourself.
Call Lutron at **1.877.258.8766 ext 244**, or visit **www.lutron.com/ecosystem**.

See us at NeoCon, **booth #7-1099**.

LUTRON
Lutron controls your light...

CIRCLE 2 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

KUSSER AICHA Graniteworks USA

Design with Natural Stone

Making the Impossible Reality!

- Original KUGEL Floating Ball
- Floating Objects
- Monumental Works of Art
- Granite Fountains, Waterwalls
- Natural Stone Elements
- Prestressed Granite
- Custom Design
- Complete Engineering Support



Science Museum of Virginia
Richmond VA
Floating Sphere Diameter
8'08-5/16"
Material: Bon Accord Granite

Largest Floating Granite Sphere in the World

800-919-0080
www.kusserUSA.com
kusserUSA@kusser.com

CIRCLE 3 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
MANAGING EDITOR	Beth Broome, *elisabeth_broome@mcgraw-hill.com*
DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
DEPUTY EDITORS	Clifford A. Pearson, *pearsonc@mcgraw-hill.com*
	Suzanne Stephens, *suzanne_stephens@mcgraw-hill.com*
	Charles Linn, FAIA, Profession and Industry, *linnc@mcgraw-hill.com*
SENIOR EDITORS	Sarah Amelar, *sarah_amelar@mcgraw-hill.com*
	Sara Hart, *sara_hart@mcgraw-hill.com*
	Deborah Snoonian, P.E., *deborah_snoonian@mcgraw-hill.com*
	William Weathersby, Jr., *bill_weathersby@mcgraw-hill.com*
	Jane F. Kolleeny, *jane_kolleeny@mcgraw-hill.com*
PRODUCTS EDITOR	Rita Catinella Orrell, *rita_catinella@mcgraw-hill.com*
NEWS EDITOR	Sam Lubell, *sam_lubell@mcgraw-hill.com*
DEPUTY ART DIRECTOR	Kristofer E. Rabasca, *kris_rabasca@mcgraw-hill.com*
ASSOCIATE ART DIRECTOR	Clara Huang, *clara_huang@mcgraw-hill.com*
PRODUCTION MANAGER	Juan Ramos, *juan_ramos@mcgraw-hill.com*
WEB EDITOR	Randi Greenberg, *randi_greenberg@mcgraw-hill.com*
WEB DESIGN	Susannah Shepherd, *susannah_shepherd@mcgraw-hill.com*
WEB PRODUCTION	Laurie Meisel, *laurie_meisel@mcgraw-hill.com*
EDITORIAL SUPPORT	Linda Ransey, *linda_ransey@mcgraw-hill.com*
	Monique Miller, *monique_miller@mcgraw-hill.com*
COPY EDITOR	Leslie Yudell
ILLUSTRATOR	I-Ni Chen
EDITORIAL ASSISTANTS	Audrey Beaton, Larissa Babij
EDITOR AT LARGE	James S. Russell, AIA, *jamesrussell_editor@earthlink.net*
CONTRIBUTING EDITORS	Raul Barreneche, Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Nancy Levinson, Thomas Mellins, Robert Murray, Sheri Olson, FAIA, Nancy B. Solomon, AIA, Michael Sorkin, Michael Speaks, Ingrid Spencer
SPECIAL INTERNATIONAL CORRESPONDENT	Naomi R. Pollock, AIA
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz
GROUP PUBLISHER	James H. McGraw IV, *jay_mcgraw@mcgraw-hill.com*
VP, ASSOCIATE PUBLISHER	Laura Viscusi, *laura_viscusi@mcgraw-hill.com*
VP, MARKETING AND BUSINESS DEVELOPMENT	David Johnson, *dave_johnson@mcgraw-hill.com*
VP, GROUP EDITORIAL DIRECTOR	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
GROUP DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
DIRECTOR, CIRCULATION	Maurice Persiani, *maurice_persiani@mcgraw-hill.com*
	Brian McGann, *brian_mcgann@mcgraw-hill.com*
DIRECTOR, MARKETING COMMUNICATION	Chris Meyer, *chris_meyer@mcgraw-hill.com*
DIRECTOR, MULTIMEDIA DESIGN & PRODUCTION	Susan Valentini, *susan_valentini@mcgraw-hill.com*
MANAGER, ADVERTISING PRODUCTION	Stephen R. Weiss, *stephen_weiss@mcgraw-hill.com*
DIRECTOR, FINANCE	Ike Chong, *ike_chong@mcgraw-hill.com*
DIRECTOR, SPECIAL PROJECTS	Charles Pinyan, *cpinyan@mcgraw-hill.com*
REPRINTS	Reprint Management Services, *architecturalrecord@reprintbuyer.com*

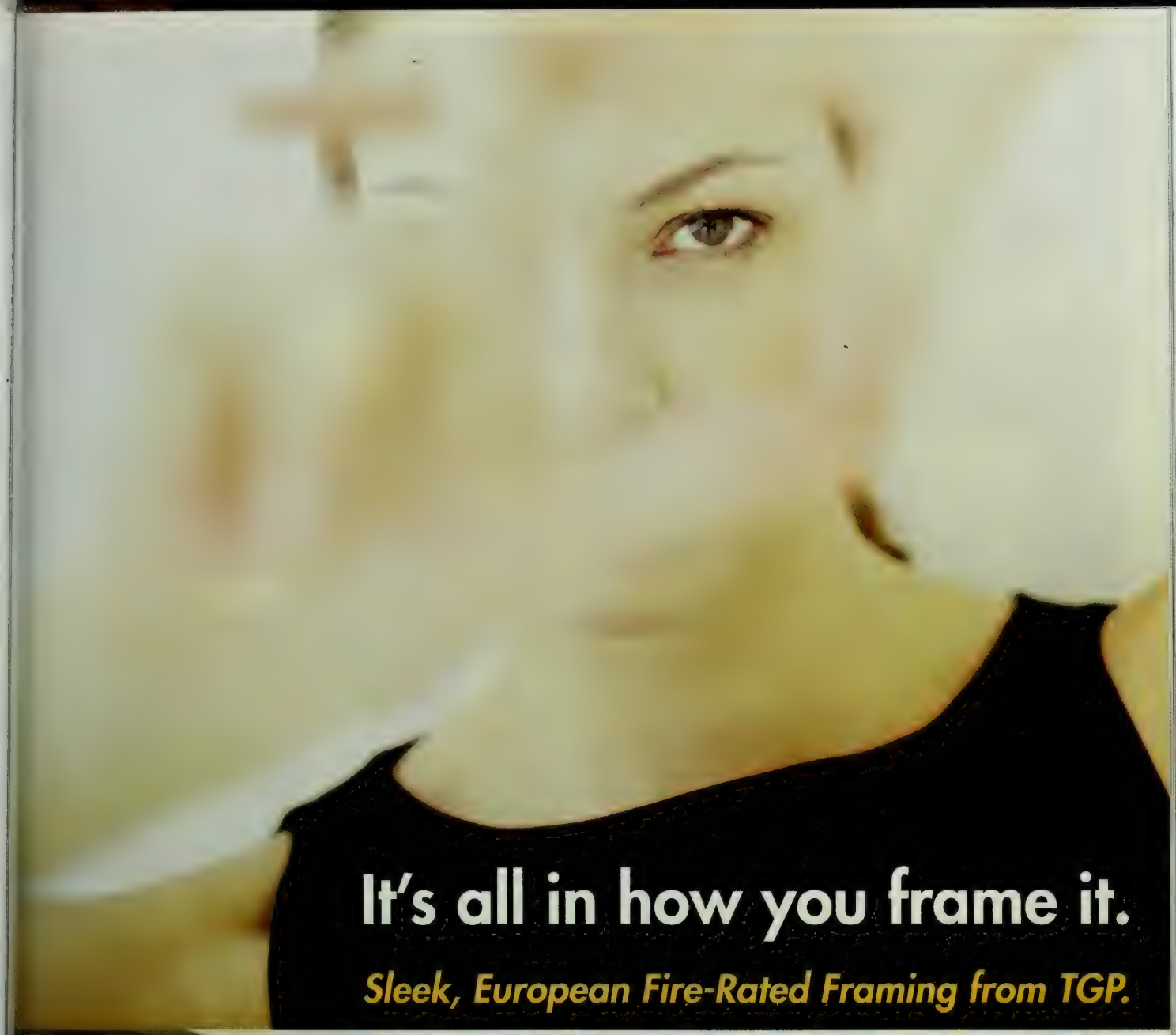
EDITORIAL OFFICES: 212/904-2594. Editorial fax: 212/904-4256. E-mail: *rivy@mcgraw-hill.com.* Two Penn Plaza, New York, N.Y. 10121-2298. **WEB SITE:** www.architecturalrecord.com. **SUBSCRIBER SERVICE:** 877/876-8093 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087. E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions. 800/242-3837. E-mail: *members@aia.org.* **INQUIRIES AND SUBMISSIONS:** Letters, Robert Ivy; Practice, Charles Linn; Books, Clifford Pearson; Record Houses and Interiors, Sarah Amelar; Products, Rita Catinella Orrell; Lighting and Interiors, William Weathersby, Jr.; Residential, Jane F. Kolleeny; Web Editorial, Randi Greenberg.

ARCHITECTURAL RECORD: (ISSN 0003-858X) June 2005. Vol. 193, No. 06. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. 10020. Periodicals postage paid at New York, N.Y. RCSC and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 40012501. Return undeliverable Canadian addresses to: DPGM Ltd., 4960-2 Walker Road, Windsor, ON N9A 6J3. Email: P64ords@mcgraw-hill.com. Registered for GST as The McGraw-Hill Companies. GST No. R123075673. ***Postmaster:*** *Please send address changes to* ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates are as follows: U.S. and Possessions $64; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $9.95; for foreign $11. Subscriber Services: 877/876-8093 (U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087. **SUBMISSIONS:** Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage. **SUBSCRIPTION LIST USAGE:** Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520. **OFFICERS OF THE MCGRAW-HILL COMPANIES:** *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Human Resources:* David L. Murphy. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Kathleen A Corbet, *President, Standard & Poors;* Henry Hirschberg, *President, McGraw-Hill Education;* Scott C. Marden, *President, McGraw-Hill Information and Media Services.* **MCGRAW-HILL CONSTRUCTION:** Norbert W. Young, Jr., FAIA, *President. Vice President and CFO:* Louis J. Finocchiaro. **COPYRIGHT AND REPRINTING:** Title ® reg. in U.S. Patent Office. Copyright © 2005 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC, ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 800/360-5549 X 129 or e-mail architecturalrecord@reprintbuyer.com. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information of for any damages resulting there from.

McGraw-Hill CONSTRUCTION ABC MPA

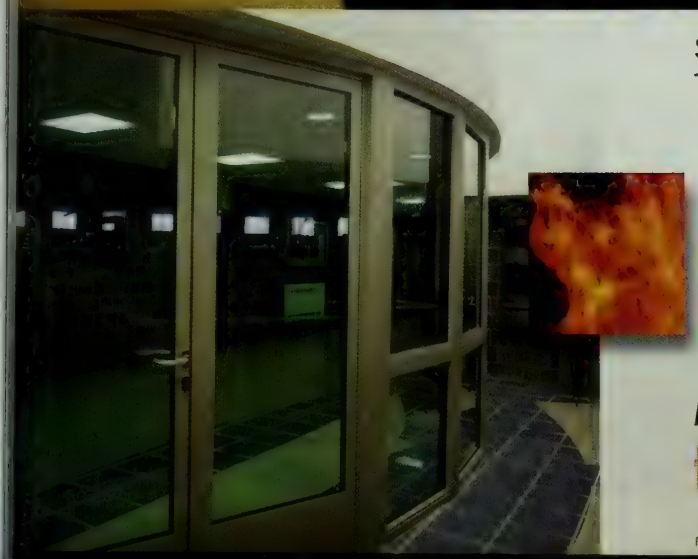
THE AMERICAN INSTITUTE OF ARCHITECTS 2005 BOARD OF DIRECTORS • OFFICERS: Douglas L. Steidl, FAIA, MRAIC, President; Kate Schwennsen, FAIA, First Vice President; Shannon Kraus, AIA, Vice President; Thomas R. Mathison, FAIA, Vice President; RK Stewart, FAIA, Vice President; John C. Senhauser, FAIA, Secretary; James A. Gatsch, FAIA, Treasurer; Ana Guerra, Associate AIA, Associate Representative to the AIA Executive Committee; Saundra Stevens, Hon. AIA, CACE Representative to the AIA Executive Committee; Norman L. Koonce, FAIA, Executive Vice President/CEO. • **REGIONAL DIRECTORS:** Peter J. Arsenault, AIA, NCARB, LEED AP; Douglas E. Ashe, AIA; Michel C. Ashe, AIA; Ronald J. Battaglia, FAIA; William D. Beyer, FAIA; Michael Broshar, AIA; David J. Brotman, FAIA; Randy Byers, AIA; Tommy Neal Cowan, FAIA; Jacob Day; Jeremy Edmunds, Associate AIA, LEED AP; Glenn H. Fellows, AIA; Robert D. Fincham, AIA; Jonathan L. Fischel, AIA; Marion L. Fowlkes, FAIA; Saul Gonzalez; The Hon. Jeremy Harris, Hon. AIA; John J. Hoffmann, FAIA; William E. Holloway, AIA; Clark Llewellyn, AIA; Marvin J. Malecha, FAIA; Clark D. Manus, FAIA; Linda McCracken-Hunt, AIA; Carl F. Meyer, FAIA; George H. Miller, FAIA; Elizabeth E. Mitchell; Hal P. Munger, AIA; Robin L. Murray, AIA, PP; Celeste A. Novak, AIA, LEED AP; Gordon N. Park, CDS, AIA; David R. Proffitt, AIA; Marshall E. Purnell, FAIA; Miguel A. Rodriguez, AIA; Jerry K. Roller, AIA, NCARB; Jeffrey Rosenblum, AIA; Robert J. Selby, FAIA; Norman Strong, FAIA; Leslie J. Thomas, AIA; J. Benjamin Vargas, AIA; Bryce A. Weigand, FAIA. • **AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, Executive Vice President/CEO; James Dinegar, CAE, Chief Operating Officer; Richard J. James, CPA, Chief Financial Officer; Jay A. Stephens, Esq., General Counsel; Helene Combs Dreiling, FAIA, Team Vice President, AIA Community; Ronald A. Faucheux, PhD, Esq., Team Vice President, AIA Government Advocacy; Barbara Sido, CAE, Team Vice President, AIA Knowledge; Elizabeth Stewart, Esq., Team Vice President, AIA Public Advocacy; David Downey, CAE, Assoc. AIA, Managing Director, AIA Communities by Design; Suzanne Harness, AIA, Esq., Managing Director and Counsel, AIA Contract Documents; Richard L. Hayes, Ph.D., RAIC, AIA, CAE, Managing Director, AIA Knowledge Resources; Brenda Henderson, Hon. AIA, Managing Director, AIA Component Relations; Christine M. Klein, Managing Director, AIA Meetings; Carol Madden, Managing Director, AIA Membership Services; Philip D. O'Neal, Managing Director, AIA Technology; C.D. Pangallo, EdD, Managing Director, AIA Continuing Education; Terence J. Poltrack, Managing Director, AIA Communications; Phil Simon, Managing Director, AIA Marketing and Promotion; Laura Viehmyer, SPHR, CEBS, CAE, Chief Human Resources Officer.

PRINTED IN USA



It's all in how you frame it.

Sleek, European Fire-Rated Framing from TGP.



Say goodbye to bulky, wrap-around framing. Fireframes® from TGP give you the beauty and performance your design needs.

- ***Fire-rated up to 2 hours***
- ***Narrow profile steel framing***
- ***Available in stainless steel***
- ***U.L. listed***
- ***Easy to install***
- ***Factory finished***

For more information, visit

fireglass.com

TGP
Technical Glass Products™

1-800-426-0279

CIRCLE 4 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Fireframes is a registered trademark and Technical Glass Products is a trademark of Technical Glass Products. © 2005 Technical Glass Products. All rights reserved.



© 2004 Weather Shield Mfg., Inc.

The difference between status quo and **STATUS SYMBOL**.

Showcased at left: Mahogany, one of eight wood species from Weather Shield's Custom Wood Interiors Collection™ that can serve as a mesmerizing focal point or stunning complement for virtually any architectural style. Specified here on Weather Shield Legacy Series® French hinged patio doors featuring simulated divided lite grilles and coordinating archtop transom windows. For complete design options, call **1-800-477-6808** or visit **weathershield.com/AR**



Demand better. Compromise nothing. **Want More**™

CIRCLE 5 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Weather Shield® Premium Windows and Doors

Pyramid Events Center
Cal State University, Long Beach, CA
Architect: Donald Gibbs, F.A.I.A.
Product: Sustainable metal cladding





It's the environment—where a building's ecological impact is as important as its visual impact. Nearly 100 million tons of metal are recycled in the U.S. annually, more than all other materials combined, including glass and paper.

In LEED® assessment, metal is a must-have "green" material. A typical metal cladding has at least 25% recycled content and at the end of its long life is 100% recyclable. Being inert, metal has no adverse effect on atmospheric or indoor air quality.

Cool metal roofing significantly reduces a building's long-term energy use. With heat-deflecting metal coatings, HVAC costs can drop 40% or more! Metal also affords maximum design freedom with dramatic shapes, surface textures and colors, so buildings better complement their environments.

Visit our web site for more on the green benefits of metal. Plus, information on metal construction products, case histories, photos, news, related links, and more. See where metal really shines at: **www.themetalinitiative.com**

® LEED is a registered trademark of the U.S. Green Building Council.

CIRCLE 6 ON READER SERVICE CARD OR GO TO ARCHIVESOURCE.COM/PRODUCTS/



Brownfield of dreams.

"Buildings should feel local," says David Greusel, a principal with HOK Venue in Kansas City. He's the design architect of PNC Park in Pittsburgh and Minute Maid Park in Houston, two of major league baseball's most celebrated new venues.

PPG CFP
CERTIFIED FABRICATOR℠ PROGRAM

Solarban 60 and Solarban 80 have Solar Heat Gain Coefficients ranging from 0.24 to 0.38, with Light to Solar Gain (LSG) ratios of 1.84 to 1.96, respectively.
Starphire, Solarban, PPG and the PPG logo are trademarks and PPG Certified Fabricator is a service mark owned by PPG Industries, Inc.



Greusel's directive was recently brought to life in Dubuque, Iowa, where he helped transform an abandoned brownfield site along a Mississippi flood plain into Grand River Center, one of the country's most spectacular waterside meeting and convention venues.

Created from native Iowa limestone and a shimmering cascade of high-performance solar control glass, Grand River Center aligns Greusel's desire to work with indigenous building materials with his natural instinct to create dwellings that harmonize with the environment.

"From the reclamation of the site to the selection of building materials, there was a determined effort to make this building as green as possible," he says. "But we also wanted to make it a spectacular place to be."

Unconventional Center

To achieve these dual objectives, Greusel took a pair of proven PPG products and employed a novel twist. Alternating bands of *Solarban*® 60 and *Solarban*® 80 glass, the architect fashioned a towering vision wall that bathes the interior of the sprawling complex in natural light while visually anchoring the structure to its historic industrial landscape.

According to Greusel, the selection of Solarban Solar Control low-E glass was critical. The glass satisfies his compulsion to practice environmentally sustainable architecture. Yet, the building's openness and transparency also allow residents of the surrounding community to establish an intimate connection with their newest architectural landmark.*

David Greusel is one of thousands of architects nationwide who look to PPG Certified Fabricators to meet their demand for high-performance glass, local fabrication, accelerated construction schedules and rapid replacement glass. To find the name of a PPG Certified Fabricator℠ near you, call 800-377-5267 or visit www.ppgcfp.com.

Architect: HOK Sport + Venue + Event
Glazing Contractor: East Moline Glass Company
Glass Fabricator: Oldcastle Glass

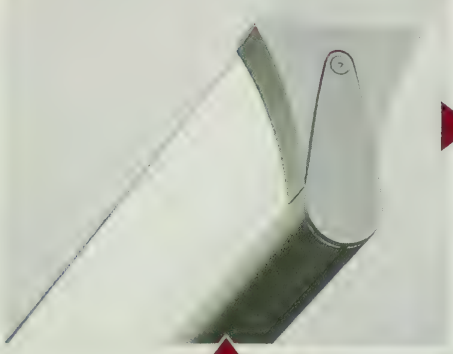
PPG IdeaScapes
Glass • Coatings • Paint

CIRCLE 7 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PPG Industries, Inc., Glass Technology Center, Guys Run Road, Pittsburgh, PA 15238-1305 www.ppgideascapes.com

THIS SQUARE HAS EIGHT FACETS - NOW THAT'S THINKING OUTSIDE THE BOX!

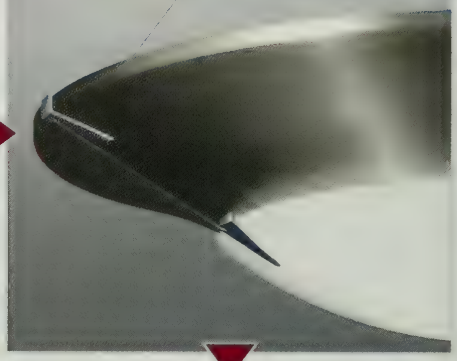
DESIGN



VALUE

The price of a quality Visa product is less than you might think. Over half of Visa's 275 wall sconces are priced under $255, and 40% are under $200. Of 160 pendants, half are priced below $550. As a matter of fact, in all of Visa's 700+ product offerings, 44% are priced below $300*. Our value is based on our distinct quality and solid construction. We also include free freight on all orders shipped within the continental United States and Canada. We do all of this to add value to your specifications.

QUALITY



WARRANTY

Every fixture Visa produces is covered by a full 5-year limited warranty. This is made possible by our attention to robust detailing, use of high quality materials, and the extra care we apply to finishing each product. Every luminaire is bench tested prior to shipment to insure trouble free installation. Our packaging provides maximum protection against freight damage, with minimal waste (we don't use foam peanuts). On the rare occasion we experience a problem, we fix it. We do whatever it takes to make it right for the customer.

FLEXIBILITY

Visa offers over 700 made-to-order products in 65 standard finishes, with RAL paint and ANSI BHMA metal finishes, dimming, emergency, and many options to tailor a standard product to your needs. For even more design opportunities, Visa offers a Variations service to customize a product to specific project requirements, including changes to detailing, scale, finish, lamping, and unique configurations. Our catalog even suggests simple variations for you to consider in making your design vision a reality. Let us flex our design muscle to suit your needs.

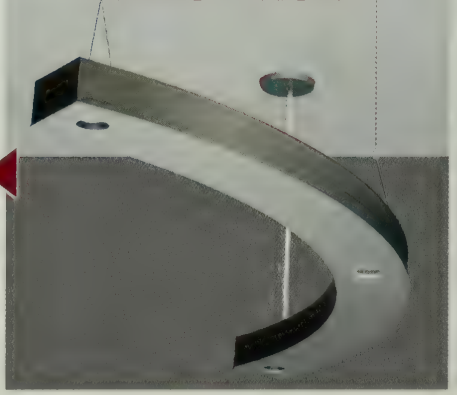
PERFORMANCE



AVAILABILITY

Visa products ship within 4 to 6 weeks from the receipt of an order. This means that the quality and value of Visa is within reach of most project time lines. However, should you need even faster delivery, we offer the XPS option for Express Shipment in 10 days. XPS is available on 75% of the Visa product range, including most finishes and options, to insure you of not having to compromise your design to meet a tough deadline. Get what you want without compromise.

INNOVATION





RESOURCES

The Visa catalog is 520 pages of product, specification, photometric data, and variation suggestions in a specifier friendly format. Backing up this desktop resource is a website with the most sophisticated configurable product specification utility in the lighting industry. The website includes photometric data, installation instructions, applications images, and much, much more. The website is also indexed and referenced to the catalog to make navigation simple and fast. Get the Visa catalog, visit the Visa website, and take advantage of all we have to offer. You won't be disappointed.

1-800-788-VISA • www.visalighting.com

VISA LIGHTING
An Oldenburg Group Company

* Price ranges shown are based on Visa distributor net list price.

CIRCLE 8 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL RECORD

06.2005



On the Cover: *Toyo Ito's Tod's Omotesando Building. Photograph by Hiro Sakaguchi*
Right: *Krueck & Sexton's Shure Technology Center. Photo by Steve Hall/Hedrich Blessing*

News

25 Freedom Tower to be redesigned
26 SOM's Oakland Cathedral breaks ground

Departments

17 Editorial: Super-size Me?
19 Letters*
47 Archrecord2: For the emerging architect*
51 Critique: Architecture as symbol *by Michael Sorkin*
57 Snapshot: Central Methodist Church *by Beth Broome*
229 Dates & Events*
247 Record House of the Month *by Sam Lubell**

Features

62 Reinventing Qingpu *by Jen Lin-Liu*
Shanghai's long-ignored suburb is about to experience a renaissance.

72 After Theory *by Michael Speaks*
In architecture schools, debate rages about the value of theory.

Projects

78 Tod's Omotesando Building, *Japan* *by Naomi R. Pollock, AIA**
Toyo Ito & Associates, Architects
Shoe purveyor strikes a pose on Tokyo's fashionable boulevard.

86 Shaw Center for the Arts, *Louisiana* *by Sam Lubell**
Schwartz/Silver Architects
A dynamic arts complex heralds Baton Rouge's rejuvenation.

92 Porter Boathouse, *Wisconsin* *by Nancy Levinson**
Vincent James Associates Architects
Sleek as a racing shell, new home suits its winning rowing team.

98 Vacheron Constantin Headquarters and Factory, *Switzerland*
*by Suzanne Stephens**
Bernard Tschumi Architects (New York)
Wrapped in perforated steel, shimmering complex seems to levitate.

106 Shure Technology Center, *Illinois* *by Cheryl Kent**
Krueck & Sexton Architects
An addition complements existing building and defines a campus.

Building Types Study 846

115 Introduction: Health Care *by Sarah Amelar*

116 REHAB Basel, *Switzerland* *by Suzanne Stephens**
Herzog & de Meuron

122 Dalseth Family Dental Clinic, *Minnesota* *by Bette Hammel**
ALTUS Architecture + Design

126 Yawkey Center, *Massachusetts* *by Clifford A. Pearson**
Cambridge Seven Associates

For 7 additional Health Care projects, go to Building Types Study at **architecturalrecord.com**.

Architectural Technology

133 Introduction *by Deborah Snoonian, P.E.**

135 How Is LEED Faring After Five Years in Use?
*by Nancy B. Solomon, AIA**
Competitors are emerging, but the jury's still out.

144 Spotlight on Systems Research *by Ted Smalley Bowen and Peter Criscione**
Four universities strive to make buildings work more efficiently.

150 Zoom In: Experimental Media and Performing Arts Center
*by Deborah Snoonian, P.E.**

153 Tech Briefs

159 Tech Products

Interiors

185 Introduction *by William Weathersby, Jr.*

186 New York City Firehouses *by William Weathersby, Jr.*
Prendergast Laurel Architects

192 Corkin Shopland Gallery *by Barbara Dixon*
Shim-Sutcliffe Architects

198 Product Design: Architectonic draperies *by William Weathersby, Jr.*
Mary Bright Studio

203 Interior Products *by Rita Catinella Orrell*

Products

207 Doors & Windows
215 Product Briefs
221 Product Literature
232 Reader Service*
224 AIA/CES Self-Report Form*

AR is the proud recipient of a
National Magazine Award for General Excellence

* You can find these stories at **www.architecturalrecord.com**, including expanded coverage of Projects, Building Types Studies, and Web-only special features.

This month in Continuing Education

In This Issue:

Pages 163 – 182 **Associations: Dynamic Connections for the Profession**

Multi-sponsored

LEARNING OBJECTIVES:

- Know the difference between trade, professional and manufacturing associations
- Understand the value of associations to the profession
- Understand how to utilize association resources



This month at archrecord.construction.com



Building Types Study

Find out how healthcare facility design can improve medical outcomes and general well-being. And on the Web, we feature seven additional projects that are not available in print.

Sponsored by

Follansbee

PPG IdeaScapes Glass • Coatings • Paint

Daily Headlines

Get the latest scoop from the world of architecture.

Health Center "GIRONA-3," Architects: Jaime Coll, Judith Leclerc



Corkin Shopland Gallery, Toronto
Photography: © James Dow

Quarterly Interiors

Get an up close and personal look at our Interiors–architects distill a Toronto art gallery from a brick shed, while form finds freedom at New York City firehouses.



COTE Award Winners, Courtesy AIA

Multimedia Annex

In this Web exclusive, not only can you see the winners of the 2005 COTE Green Projects Awards, you can also hear two jury members discuss the reasons these exceptional green designs were chosen.

Sponsored by

ALPOLIC®

connecting people_projects_products

Dodge Sweets Architectural Record

McGraw-Hill CONSTRUCTION

Find us online at www.construction.com

The McGraw-Hill Companies

Introducing ultimate variety...

Acrovyn® Platform Handrails.

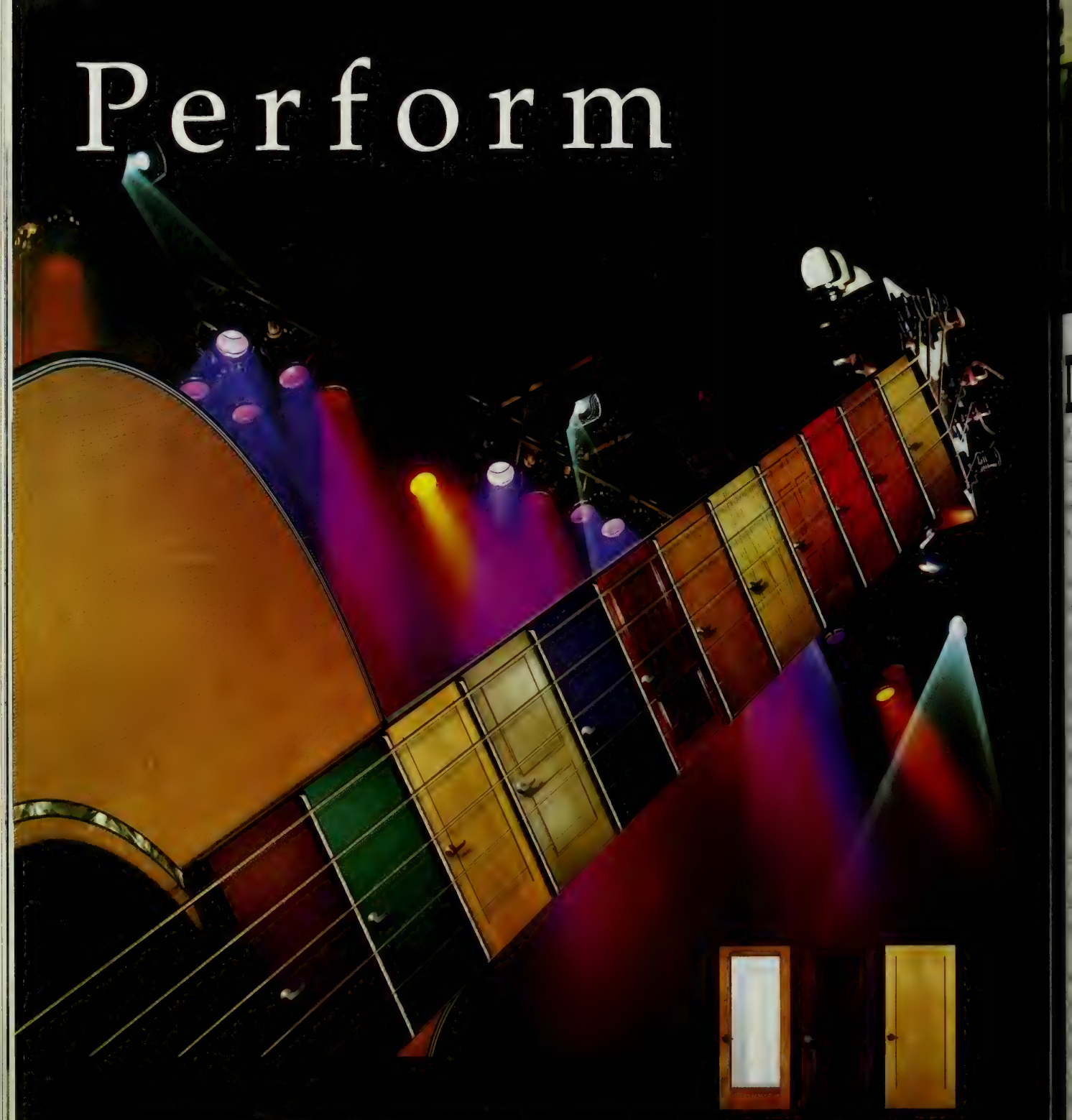


Now wall protection and unique, individual style are a singular reality. That's because of **a brand new concept made possible by Acrovyn's new innovative mounting system** with dual cantilevered brackets. It allows you to **mix and match our standard handrails, crash rails and end caps in almost infinite varieties.** Choose your mix from standard **Acrovyn in 60 colors** and **157 patterns**, **eight powder coated aluminum finishes**, or **four species of wood in four stain finishes.** **Call 1-888-621-3344** for more information or visit **www.c-sgroup.com/pfr.**

* Patent pending

CIRCLE 9 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Perform



Express yourself. Upstage your clients' expectations with mellow wood veneers or upbeat laminates. Present a flawless show with our factory finish and new stile and rail doors. And make your design a lasting classic with our proven durability. Set the tone with VT Architectural Wood Doors.

Call our new Architectural Hotline at 1-800-827-1615 ext. 345 or visit www.vtindustries.com/doors.

VT INDUSTRIES Architectural Wood Doors

CIRCLE 10 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Super-size Me?

Editorial

By Robert Ivy, FAIA

It erupted as a primal scream from a frazzled-looking conventioneer leaning against a wall, hair askew, punctuated by a complaint repeated by others in corridors and grand spaces: "Get me out of here!" Not everyone felt it; many, if not most, reveled in the mix. Still, some visitors to the rousingly successful AIA National Convention, which attracted a record number (24,500) to its positive energy, experienced a type of sensory overload and psychological distress. Their discomfiture bears scrutiny, since the source of their collective angst lies embedded in architecture.

The problem, in a word, is Big. It makes some of us, like the distressed visitor, lose our emotional cool. The occasional human reaction to excessively fulsome crowds and sizable spaces has a big name for a real condition—agoraphobia. In its classic sense, the term refers to the fear of open spaces. Related to claustrophobia, it breeds in gigantic enclosures, and includes phobias centered on crowds, shops, and public places; psychologists describe one operable variant as the fear of shopping malls. Fueled by large milling crowds, it can produce a kind of nameless panic, exacerbated by hermetic environments such as the typical humongous Las Vegas casino/hotel/convention complex, where visible exits to air and sunlight are remote, few, and hard to find.

You may have experienced twinges of its effects in high-rise New York, or like Bill Murray in the movie Lost in Translation, *who was hit with a heavy case of ennui awakening in a hotel tower far above Tokyo. Dislocated and out of sorts, he was literally, hilariously removed from reality and mired in an existential dilemma. He, and a few conventioneers in Nevada, suffered distress, if not full-blown agoraphobia. Sound familiar?*

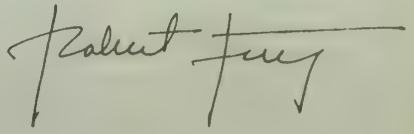
What are the architectural determinants of this mini-paranoia? A primary cause is scale. Despite the American penchant for the super-sized, not all vastness is benevolent: Gigantism contains traces of bombast and overt manipulation mixed in with the fun. At mass gathering places, with few retreats for intimacy or personal space, we are literally being herded and told how to feel. In hotels with 5,000 rooms and tens of thousands of conventioneers, mega-corridors that extend for hundreds of yards, as high and wide as Mammoth Cave, even those that twist and turn seductively can prove oppressive rather than expansive, stifling human presence and producing dread mixed with awe. Skylights, if placed too high, will not necessarily alleviate the gloom, nor will atria, which can contribute their own oppressive weight.

To scale, add excessive sensory stimulation. In the typical Vegas public interior, we are bombarded with sound, from the '60s-funky Muzak in the elevators to the accelerating ka-chink of the slots. The air reeks of smoke, or air freshener, or eucalyptus. Oxygen whooshes; lights blink and pop. In the desert, where temperatures can soar above 100 degrees Fahrenheit in May, conditioned environments have superseded the open-air strip, permitting a seamless transition from internalized plane to car to hotel room. You never need break a sweat.

We might dismiss Vegas as our beloved aberration, our own neon American Pie, except for the way it has come to crystallize certain distinctly American values. The strip has become the urban equivalent of a halftime show at the Super Bowl—big and universally embraced here, but what is it all about? Since the world seems bent on adopting heroic American consumerism, it looks to Las Vegas as much as to Main Street, U.S.A. The massively scaled cities of China and India, for example, hold the potential for the best of urban life as well as the worst excesses of contemporary material culture. Will their reinvented cities ape the big, broad stroke or the fine-grained? Will they prove life-enhancing or overwhelming? Like it or not, Vegas seems to hold sway in the collective imagination.

Meanwhile, the desert city continues to pack 'em in, attracting 38 million tourists per annum, 6,000 to 8,000 new residents per month, and billions in construction dollars. The most expensive project yet built there, the sophisticated new Wynn resort complex, completed in 2004, cost $2.7 billion. The phenomenon is growing: Plans are under way for the MGM Mirage's Project CityCenter, which will exceed any previous construction on the Richter scale, a strip metropolis on 66 acres of prime caliche. Super-size me!

The 2005 convention was a hit. People loved the town. But Las Vegas also teaches us to ask which American dream we are helping to construct, at home and abroad, and whether it will provoke delight or panic. Before you draw another line, ask what is the scale? Where is the door? Let me out of here!





YKK AP *is...* *green.*

YKK Group Environmental Charter

The YKK Group Environmental Charter was established in September 1994 and has consistently taken on environmental issues as a company-wide challenge. The principle of the Environmental Charter is to promote prosperous, healthy lives and harmonious coexistence with our environment and to preserve and improve the environment throughout our corporate operations. Through our corporate activities, we seek to develop an environmentally friendly management style and contribute to the establishment of a recycle-type economic society by promoting environmental policies at all stages – from design and production to disposal, recovery, and recycling.

ISO 14001:2004 Certified

www.ykkap.com
1-800-955-9551

Recycling and Reuse

- All postindustrial aluminum waste is recycled for reuse on-site
- All anodizing byproducts are converted into materials for industrial reuse
- All paper and cardboard waste is recycled and we use electronic forms whenever possible to minimize paper consumption

Reducing Emissions

- At only 5%, our air emission levels from paint processes are far below current EPA standards
- Regenerative burners in our melting and casting processes enable savings of 50% on fuel consumption

Wastewater Treatment

- YKK AP independently developed technology to improve wastewater processes associated with anodizing
- Initial recovery prior to treatment processes reduces wastewater and chemical consumption

©2005 YKK AP America Inc. is a subsidiary of YKK Corporation of America.
CIRCLE 11 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Letters

Fruits of pro bono labor
Architecture, planning, and design are about serving the greater good, and it is encouraging when this is done in a direct manner that benefits our most underserved communities. I dispute, however, Robert Ivy's assertion in his May editorial [page 25] that public architecture is "something entirely fresh"; pro bono design has been happening at the local and national level for years.

Since the late 1960s, community design centers have been serving an active and activist role in helping community-based organizations create affordable housing, build playgrounds, expand social-service centers, and improve neighborhoods. Many of these centers are associated with universities, building a culture of community service and participatory design among its students that will carry into their professional careers. Others, like the Community Design Center of Pittsburgh, the Community Design Collaborative in Philadelphia, and the Neighborhood Design Center in Baltimore, mobilize volunteer architects, landscape architects, planners, and other design professionals to provide pro bono services in their local communities. Since 1968, the Neighborhood Design Center has assisted nearly 1,700 projects in the Baltimore-Washington area.

Something *is* in the air. And it is the result of good work and good deeds that for years were underfoot but are now blossoming into view. Further exposure of these projects and organizations will only encourage such efforts to grow.
—Mark Cameron, AIA, ASLA
Executive Director
Neighborhood Design Center
Baltimore

In the air and gaining ground
Thank you for Robert Ivy's May editorial. How exciting that he too has noticed the groundswell of enthusiasm for socially conscious architecture. There does indeed seem to be a renaissance occurring, not only in schools but also in the profession at large. This newer crowd seems to be more interested in talking to each other and building a network that can sustain widespread change in the processes and institutions through which we construct and manage the built environment. Now that ARCHITECTURAL RECORD has begun scratching the surface, it will hopefully not be long before the profession and public realize how strong this current is and how many accomplishments are being made. Something is indeed in the air, but it is also on the ground in increasing mass.
—M. Scott Ball
President
Association For Community Design
Brooklyn

A place to call home
It was such a pleasure to see Rick Joy's Desert Nomad House in the April issue [page 146]. As opposed to the preponderance of "clever" houses that flood the journals, Joy's house demonstrates principle, discipline, an understanding of materials,



CIRCLE 12 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

and attention to detail. It also emphasizes the house as a place to live in, rather than simply an object to look at—a home. Needless to say, it helps to have a receptive client with a wonderful art collection.
—*David H. Karp*
Los Angeles

Safe houses they're not

Your latest issue of Record Houses [April 2005] made me wish I were a personal injury attorney! What does it say about the state of architecture when the houses we most admire ignore their purpose of providing a safe environment for their inhabitants? Most of the stairways shown did not even have a handrail. So either the inhabitants will live in mortal danger of falling to their deaths every time they go up and down, or the architect is intending to install a railing after the photographer leaves. If the former is true, then the architect has abrogated his/her responsibility to make the house safe. If it is the latter, then he/she got lazy about finding a creative solution to a very human problem. My question is, is architecture about people, or is it the other way around?
—*Paul Sheffield*
Kailua, Hawaii

Architecture à la mode

Robert Campbell's questioning of architecture as metaphor in his April Critique [page 101] aims at the heart of what is troubling about much of current architecture. Fashionable design pursues metaphorical and inflexible form, while the average client is most concerned with flexibility and related issues of practicality and cost. The divergence of vogue from the everyday world threatens architecture's relevance. The giants of midcentury Modernism—Mies, Corbu, Frank Lloyd Wright, et al.—offered both fashion and a practical way to build.
—*James A. Gresham, FAIA*
Tucson

Better behemoths?

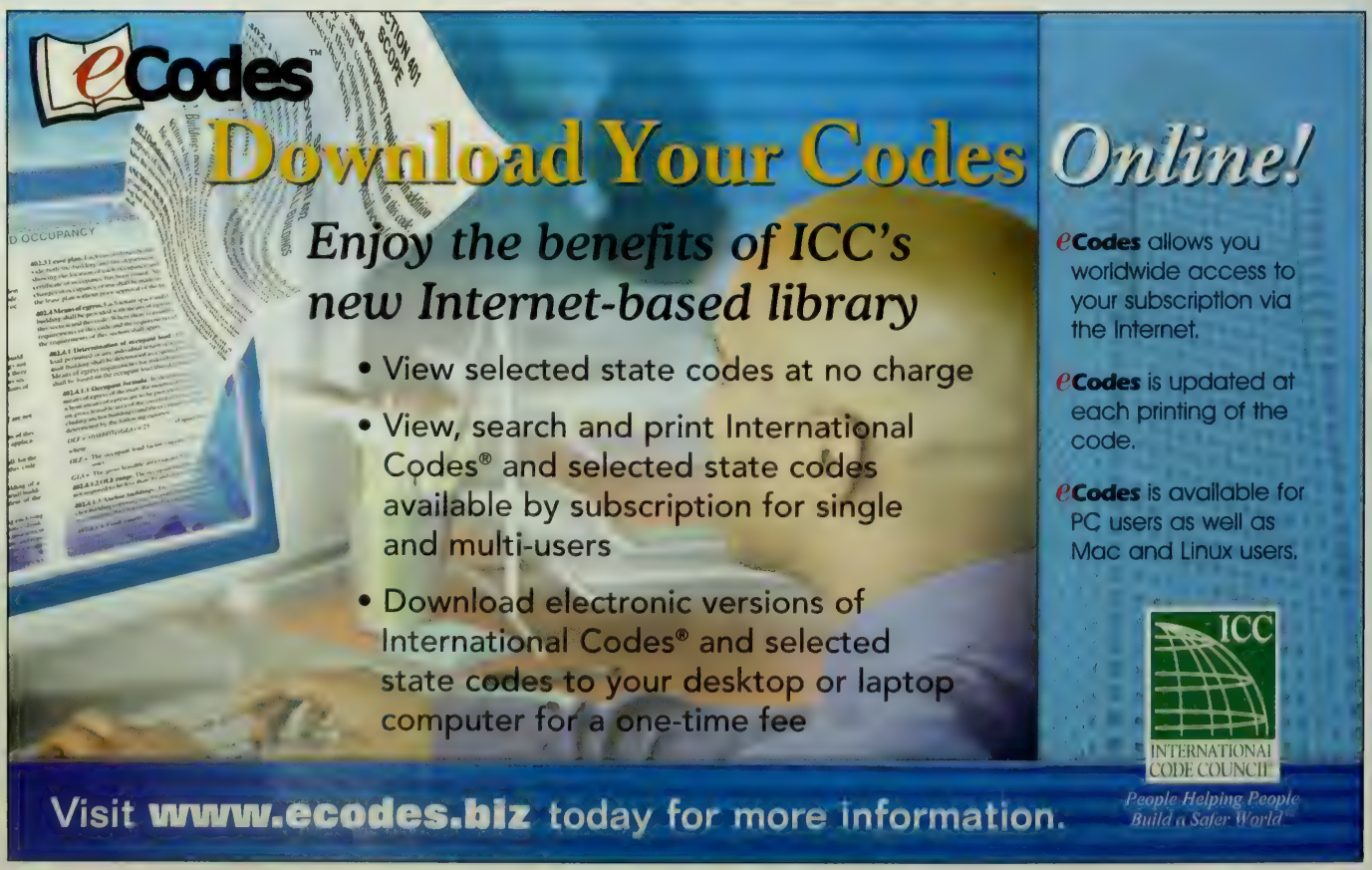
At 4,500 square feet, your news item's "alternative to 'McMansions' " [May 2005, page 56] is too BIG, and its severe Modernist style is just as imposing as anything on the block. It only lacks the multiplicity of roof shapes and vinyl siding featured in its more common neighbors. Can you imagine a neighborhood of these boxes plunked down in Coconut Grove? As for vistas, most developments eliminate those by building as many houses as they can. The only views to be had will be of the neighbor's new Beemer.

Whatever happened to vernacular, context, even the Disneylike new suburban-urbanism that is so popular? Florida has a residential design history that can be charming, satisfying, and even energy efficient. Why not give that a try? Build a development of hundreds of these sterile boxes cheek by jowl on dead-level lots in Coconut Grove and see if you can attract enough people willing to watch and be watched while they disport themselves in their pools or slap a steak on the old grill.
—*Bill Zinner, AIA*
Via e-mail

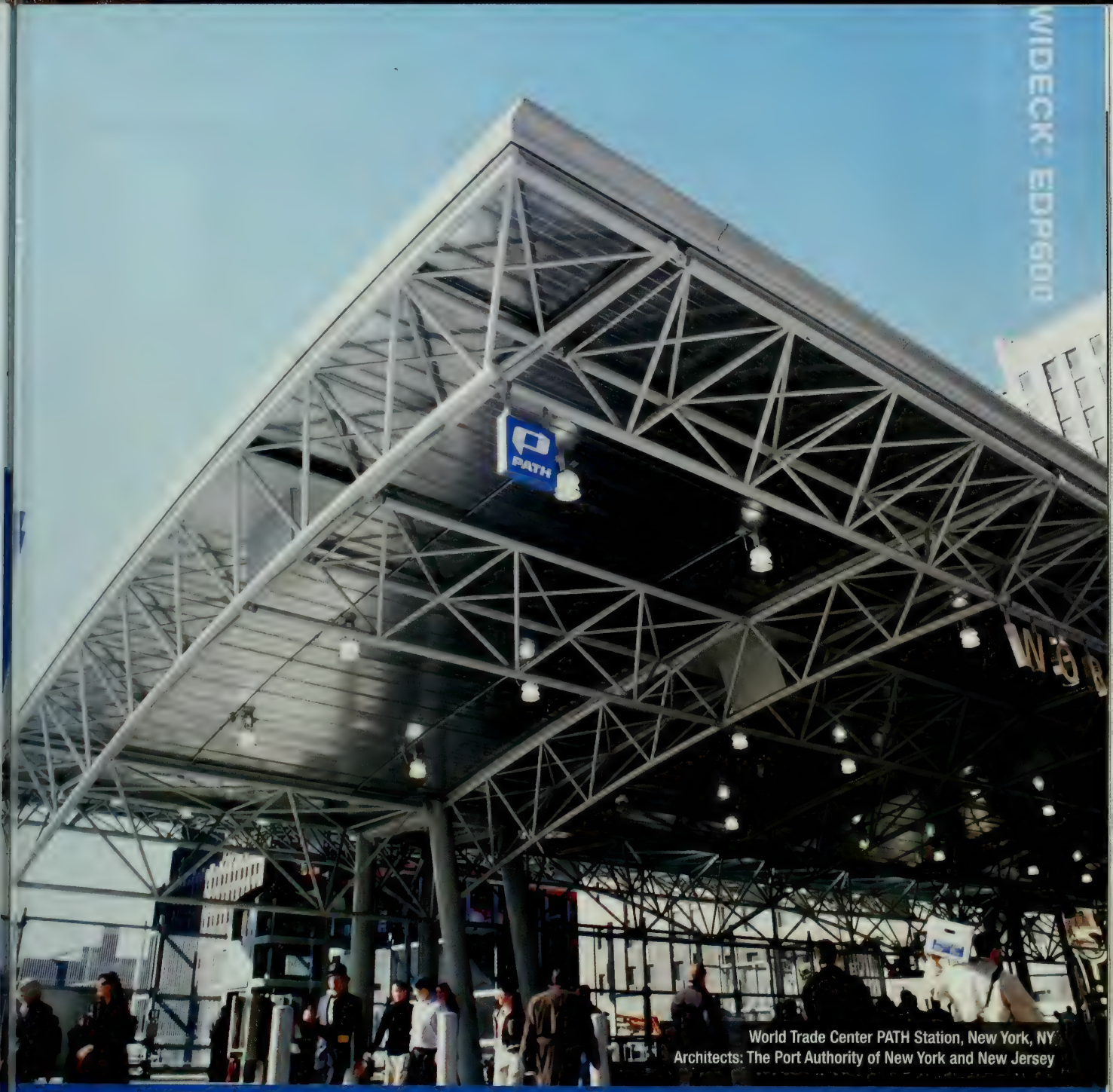
Corrections

A caption in April's Continuing Education story on high-performing envelopes [page 215] should have identified the building as the Children's Hospital of Wisconsin, not the Children's Hospital of Milwaukee. May's coverage of the Washington Mutual Leadership Center [page 320] misidentified Washington Mutual as an insurance company. In fact, it is a bank. The project cited as Lope de Vega 324 by Volvox in May's Exhibitions [page 91] is actually Higuera y Sánchez's 13 de Septiembre multi-unit housing.

Write to rivy@mcgraw-hill.com



CIRCLE 13 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



World Trade Center PATH Station, New York, NY
Architects: The Port Authority of New York and New Jersey

inspiration

Looking like they might soar away at any moment, the futuristic, cantilevered steel gull-wings of the new World Trade Center PATH Station canopy are a tribute to imagination. Helping make them possible is EPIC Metals' Wideck EDP structural roof deck ceiling system. With a flush surface appearance and strength to clear span from 10 to 34 feet, the Wideck EDP and WP systems help architectural vision become reality.

For more information call 877-696-3742, or visit epicmetals.com

EPIC METALS CORPORATION

CIRCLE 14 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Douglas Fir windows and doors for the architect inspired home.

Optional Mahogany, 36 exterior clad colors, a passion for custom design and extraordinary aesthetic plenitude.

Visit www.loewen.com to download CAD drawings or contact the Architectural Solution Center for more information.





Discover the world's most inspiring windows and doors at www.loewen.com | 1.800.563.9367

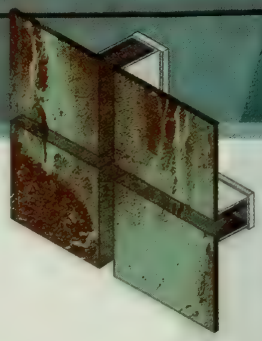
CIRCLE 15 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

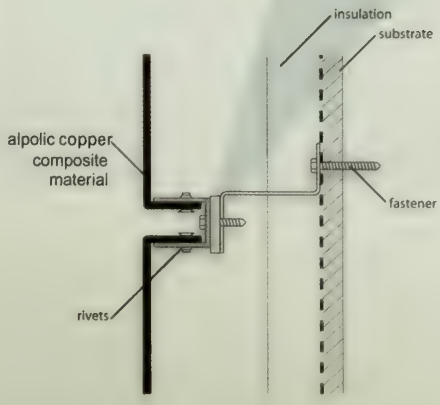


Design. Create. Inspire.









THEY DON'T BUILD THEM LIKE THEY USED TO. THEY BUILD THEM BETTER, WITH ALPOLIC®.

When a Massachusetts based biotechnology company wanted their new laboratory building to convey the company's proud heritage, their architects chose panels of ALPOLIC® Copper Composite Material (CCM), consisting of a thermosplastic core bonded between two thin sheets of copper. In addition to offering a zero maintenance finish, ALPOLIC® Copper composite panels feature the same superior durability, flatness, strength and ease of fabrication found in all ALPOLIC® Aluminum and Metal composite materials. But the ALPOLIC® Copper panels offered still another advantage: to satisfy the architect's design intent, their genuine copper surface could be treated with a unique patina process to make them look as if they had aged naturally for years! For a look that conveys the image you want, look to the global innovators of Metal Composite Material (MCM). Look to ALPOLIC®. For more information, call 1-800-422-7270 or visit us at www.alpolic-usa.com.

PROJECT: New England Biolabs | Boston, Massachusetts

ARCHITECT: Jung-Brannen Architects

SYSTEM/FABRICATOR: Rout and Return Open Joint | Ipswich Bay Glass

PRODUCT: ALPOLIC®'s Copper Composite Material (CCM) Post Pre-Patina Finish

ALPOLIC®

Reflecting The Future, Today.

©2005 Mitsubishi Chemical America, Inc. All Rights Reserved

CIRCLE 14 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Record News

Highlights

p. 26 **SOM's Oakland Cathedral breaks ground**
p. 28 **Big Apple developers embrace architecture**
p. 30 **Group organizes prison design boycott**
p. 33 **MVRDV wins first-ever Marcus Prize**

Freedom Tower to be redesigned; serious questions at Ground Zero

The rebuilding effort at Ground Zero is facing enormous questions on several fronts, led by the announcement that its centerpiece, the 1,776-foot-tall Freedom Tower, will have to be redesigned due to security concerns. The news, made public by New York Governor George Pataki on May 4, raises concerns about the office tower project and will likely delay its progress significantly. Meanwhile, construction at the Trade Center has reached a standstill, a major rebuilding official has stepped down, and the wisdom of erecting a large amount commercial space in the area has come under increased scrutiny as a planned office building for Goldman Sachs has been postponed, and 7 World Trade Center, almost complete, struggles to find tenants.



Ground Zero in July 2004 (left), and in May 2005 (right). Besides 7 World Trade Center, the site has seen virtually no changes over that time period.

After concluding a meeting with New York Mayor Michael Bloomberg, Freedom Tower developer Larry Silverstein, and various rebuilding officials, Pataki, one of the driving forces behind the 1,776-foot-tall building's conception, announced that "a new design for the Freedom Tower is required in order to meet the NYPD's security standards." The New York Police Department first expressed concerns in early April about the twisting tower's safety, centering on the building's vulnerability to an automobile-related terrorist attack, specifically from adjacent West Street. The building is currently slated for the northwest corner of the World Trade Center site. Skidmore, Owings & Merrill (SOM), the tower's architects, will now likely have to scrap its old design and begin anew. Pataki noted on May 12 that a new design would be unveiled in late June.

Speculation abounds

The announcement has set off a maelstrom of speculation and rumors about what could happen to the tower and its surroundings. *The New York Times* reported on May 5 that some building officials have speculated that the architects may have to remove the tower's torquing design in order to decrease the size of its floor plate, hence keeping it farther from the street. Other thoughts include moving the tower farther away from West Street. Ric Bell, FAIA, executive director of AIA New York, posits that the Freedom Tower's base may be changed from glass to concrete or titanium, and that Daniel Libeskind's asymmetrical spire may be removed. Some of the more conspiratorial rumors have included the suggestion that Mayor Bloomberg sabotaged, through the NYPD, Pataki's effort at Ground Zero because of the governor's lukewarm support of Bloomberg's plans for the West Side, or that SOM instigated the redesign to finally rid itself of the influence of tower consultant Daniel Libeskind.

SOM officials refused to comment, but Silverstein said in a statement that his team would cooperate fully with the police and the state. It is unknown how long the redesign will delay construction, but given the pace of major projects, it should be a substantial amount of time. Margaret Helfand, FAIA, founder of New York New Visions, a coalition of architects and planners focusing on design at the site, regrets that isolating buildings from the street grid will "further erode the urban fabric."

Little activity

The last completed construction on the Trade Center site was finished about a year and a half ago, the temporary PATH station at the site's northeast corner. On May 3, New York's Senator Charles Schumer told a meeting, "We are losing steam," and that a "culture of inertia has infected downtown redevelopment and our city in general." He warned that additional delays could jeopardize future federal funding, specifically for a possible link between JFK airport and Lower Manhattan.

7 WTC, rising to the north of the PATH station, stands without a major tenant, while Pei Cobb Freed's Goldman Sachs Building, to the northwest, has been put on indefinite hold, with the firm actively looking elsewhere for a site. Many real estate, design, and business leaders have long suggested that the amount of planned office space exceeds demand. Those cries have gotten louder with such tenancy issues. "It's insane," says Helfand, about the current plan for at least 10 million square feet of office space on the site. Bell agrees that site programming could be reconsidered, but points out, as have some real estate leaders, that office demand will increase with the completion of transportation infrastructure such as the slated transit hubs by Santiago Calatrava, FAIA, and Nicholas Grimshaw.



The Freedom Tower (above) will now be rethought.

Rampe out, Pryor and Cahill in

Kevin Rampe, who has been president of the Lower Manhattan

Development Corporation (LMDC)—which oversees development of the Trade Center—since 2003, announced on May 3 that he would leave his post at the end of the month. Rampe, who is leaving to work for Bermuda-based insurance company ACE, says his departure has been long-planned, and has nothing to do with the current developments. LMDC chairman John C. Whitehead announced on May 12 that Rampe would be replaced by Stefan Pryor, a longtime LMDC staffer. Pryor will report directly to John Cahill, senior policy adviser for Governor Pataki. In a May 12 speech, Pataki noted that Cahill, a seasoned politician, would coordinate efforts of all the parties at Ground Zero, focusing on the prompt delivery of the new Freedom Tower design, and reviving negotiations with Goldman Sachs. Helfand worries that Cahill, like many involved with decisions at Ground Zero, has little urban-planning or design experience.

Rampe feels recent concerns over the site are inflated, and says the Freedom Tower's new delays represent the Trade Center's only major obstacle. "Everything else is right on time," he says. "Overall, I'm surprised by how much progress we've made. There are always going to be hiccups with projects of this scale. Many people don't have the level of understanding to realize that this is what happens."

In his speech, Pataki, whose political future is tied intimately to developments at Ground Zero, made sure to note that "a new design for the Freedom Tower is not impeding any of our other rebuilding progress." Bell points out that any critique of the new Freedom Tower or of a possible "bunker" aesthetic at Ground Zero, involving too much opacity and concrete, is premature. "I'm willing to suspend disbelief for a month and wait and see what they come up with." *Sam Lubell*



Studio 44's plan (above) centers on the east wing's enfilade of rooms.

Contrasting Hermitage expansion plans could muddy design process

The State Hermitage Museum in St. Petersburg, Russia, has long tried to articulate a coherent design scheme for expanding its facilities into the nearby General Staff Building. The proposals, unveiled in Moscow on April 13, may have spelled out the two optimal approaches, but the discrepancies between them could obscure the future design process.

In 1989, the Hermitage acquired the east wing of the General Staff, a 19th-century complex designed by Carlo Rossi. It encloses the side of the Palace Square opposite the Hermitage and consists of a sprawling set of rooms and compartments. The Hermitage has designated the new space for its collection of 19th- and 20th-century art.

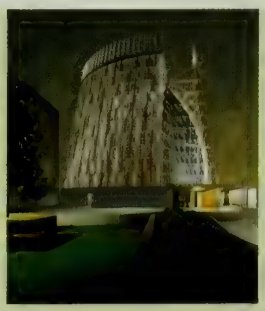
Three years ago, Studio 44, a St. Petersburg firm, won an international tender to oversee the expansion, but Office for Municipal Architecture (OMA), a participant in the competition, was retained as a consultant. The project is estimated to cost $155 million. It is partially funded by the World Bank, the Russian government, and the Hermitage-Guggenheim Foundation.

Two distinct proposals went on display at the Museum of Architecture in Moscow. In Studio 44's plan, the transverse passageways that divide the five courtyards inside the complex are linked into an enfilade of rooms that telescopes through the east wing. Shops, restaurants, and other facilities would occupy the first floor.

OMA's proposal is a calibrated intrusion rather than an overhaul of the General Staff's internal structure. A self-contained modern structure would be inserted inside the two internal courtyards, while the scheme (lacking any cohesive renderings) pays tribute to the poetic neglect of the area, trying to enable "a confrontation with art more direct and more authentic than in more 'modern' museums."

The plan, which clearly exceeds OMA's consultant role, sets itself against Studio 44's design in several parts of its presentation. None of the officials at the exhibition's press conference revealed how or if the two proposals will be reconciled. *Paul Abelsky*

SOM's Oakland Cathedral finally breaks ground



After years of uncertainty, the heavens finally aligned for the ground breaking in May of the Cathedral of Christ the Light in Oakland, California (rendering, right). Craig Hartman, FAIA, of the San Francisco office of Skidmore, Owings & Merrill, took over the $131 million project in October 2003 following the withdrawal of the original architect, Santiago Calatrava, FAIA (whose design featured a pattern of ribbed steel arches), over budget concerns. Further delays ensued when the site selected by the Diocese of Oakland could not initially be secured.

The program for the 100,000-square-foot Cathedral Center—located on the northern edge of Lake Merritt in downtown Oakland—includes a main sanctuary with a seating capacity of 1,500, smaller chapels, a baptistery, parish hall, diocese offices, conference center, rectory, library, café, and public plaza, designed by Peter Walker and Partners. Hartman's scheme was developed after extensive research into Catholic ritual, symbol, and architectural space. Most crucially, the basketlike building replaces the hierarchical plan of early cathedrals in favor of a circular arrangement of congregants around the altar, maintaining the sense of community and inclusion dictated by the Second Vatican Council in the 1960s. Additionally, the cathedral's vaults form a Vesica Pisces shape—the sacred geometry formed by the intersection of two circles—symbolically highlighting divine descent to earth.

The budget has been a challenge in the cathedral's development, Hartman acknowledges, requiring the editing of design elements and an ambitious use of technology. The cathedral's 120-foot-tall main vaults are made from Douglas fir and encased in a ceramic-frit-coated glass skin. The concrete reliquary wall at the base will be textured using molds fabricated with computer-controlled milling machines. "The intent is to use light to ennoble modest materials," Hartman explains. "It's really all about making space that is somehow emotive." *Andrew Blum*

If you look real close you can see 25 years of fire-rated glazing experience reflected in it.



SCHOTT PYRAN® fire-rated glass-ceramics are an architect's best friend.

PYRAN® is everything you've been looking for in fire-rated glass. It's fire-protective, impact-resistant and, aesthetically speaking, quite fetching. PYRAN® Crystal offers the highest standard of clarity, transmission and true color rendition. And PYRAN® Star is both beautiful and economical. PYRAN® is available with a surface applied film, laminated or polished. It comes in large sizes and is easily accessible through distributors, fabricators and glaziers. For new construction or retrofit, spec the glass with a loyal following among fire professionals – PYRAN®.

Home Tech
SCHOTT North America, Inc.
Phone: 502-657-4417
Fax: 502-966-4976
E-mail: pyran@us.schott.com
www.us.schott.com/pyran
©2005 SCHOTT North America, Inc.
® PYRAN is a registered trademark of SCHOTT AG, Mainz, Germany

CLASSIFIED UL

SCHOTT
glass made of ideas

Big Apple residential developers embracing "signature" architects



Rendering of One Kenmare Square's undulating facade.

The New York Times real estate classifieds now feature a smiling picture of Richard Meier, FAIA, advertising his new condominium tower on Charles Street in Greenwich Village. On the same page, there is a large rendering of Gwathmey Siegel's "Sculpture for Living" high-rise condo building on Astor Place in the East Village, which features "architectural" loft residences. That these architects are at the center of such aggressive marketing campaigns hints at a trend: New York developers are embracing high-quality architecture and hiring an unprecedented number of "signature" designers to build residential projects in the city.



Jean Nouvel's colorful 40 Mercer project.

The list includes not only Meier and Gwathmey, but Norman Foster, Jean Nouvel, Frank Gehry, FAIA, Herzog & de Meuron, Arquitectonica, Michael Graves, FAIA, Steven Holl, AIA, Richard Rogers, Richard Gluckman, FAIA, Christian de Portzamparc, and Robert A.M. Stern, FAIA. And that's just the beginning. Meier has four New York projects, three on the Hudson River and one in Brooklyn (no wonder he's smiling). Gwathmey Siegel has six in the works: in the East Village, the West Village, SoHo, Lower Manhattan, on Park Avenue South, and in Midtown.

So why, outside of its world-capital status, has New York become the next stop on the architects du jour traveling parade? First, it seems that New York developers have discovered that investment in good architecture yields big returns.

"Name-brand architecture sells better than your typical vanilla box," says Peter Slatin, editor and publisher of *The Slatin Report*, an online, New York–based real estate newsletter (theslatinreport.com). Buyers seem to be gravitating toward what marketers label as "distinctive" designs, which are not only attractive, but exciting—one of the chief reasons many come to the city in the first place. Hence developers, long supportive of safe, bland buildings, have begun to back projects like Gluckman's One Kenmare Square on the Lower East Side, comprising a series of shifting, curved facade bands that animate the face of the building. Nouvel's 40 Mercer features glass curtain walls with alternating red and blue panes, as well as multihued flooring and loft ceilings inside. The undulating, reflective facade of Gwathmey Siegel's project on Astor Place, while attacked by some critics, has been a huge success, yielding over $2,000 per square foot, some of the most expensive real estate in the city. "As soon as this stuff translates into more money for the developer, all of a sudden design firms become relevant to them," says Gwathmey Siegel principal Robert Siegel, FAIA.

He, along with most architects working on projects in New York, say that the success of Meier's projects (which have nonetheless experienced serious delays) have helped developers drop some of their jitters about less "safe" architecture.

Of course, the architects would not be in New York if developers did not have the luxury of a hot market and some of the richest clients in the world. Michael Slattery, senior vice president of the Real Estate Board of New York, points out that low interest rates and a wave of popularity spurred by improvements begun in the 1990s have encouraged record numbers to gobble up real estate in the city. One indicator of demand: The median price of a condo property in Manhattan went from $455,000 in 2000 to $640,000 in 2004, according to the board.

Spurred also by the success of designer "boutique" hotels, the trend has begun to catch on in cities like Chicago and Los Angeles, as well. But the closest comparisons are Las Vegas, with a plethora of projects on the Strip, and Miami, where Meier and other high-profile architects are working on luxury high-rises.

Meanwhile, as developers look for more top-rate architecture, they are also utilizing existing structures, effecting changes at some of the city's most treasured buildings. Already the Plaza Hotel's new owners, Elad Properties, are replacing the majority of the legendary building's rooms with condos. The original Metropolitan Life Insurance Building, a beautiful clocktower structure built in 1909 at One Madison Avenue, was recently sold to SL Green Realty Corporation for close to $1 billion to convert into condos.

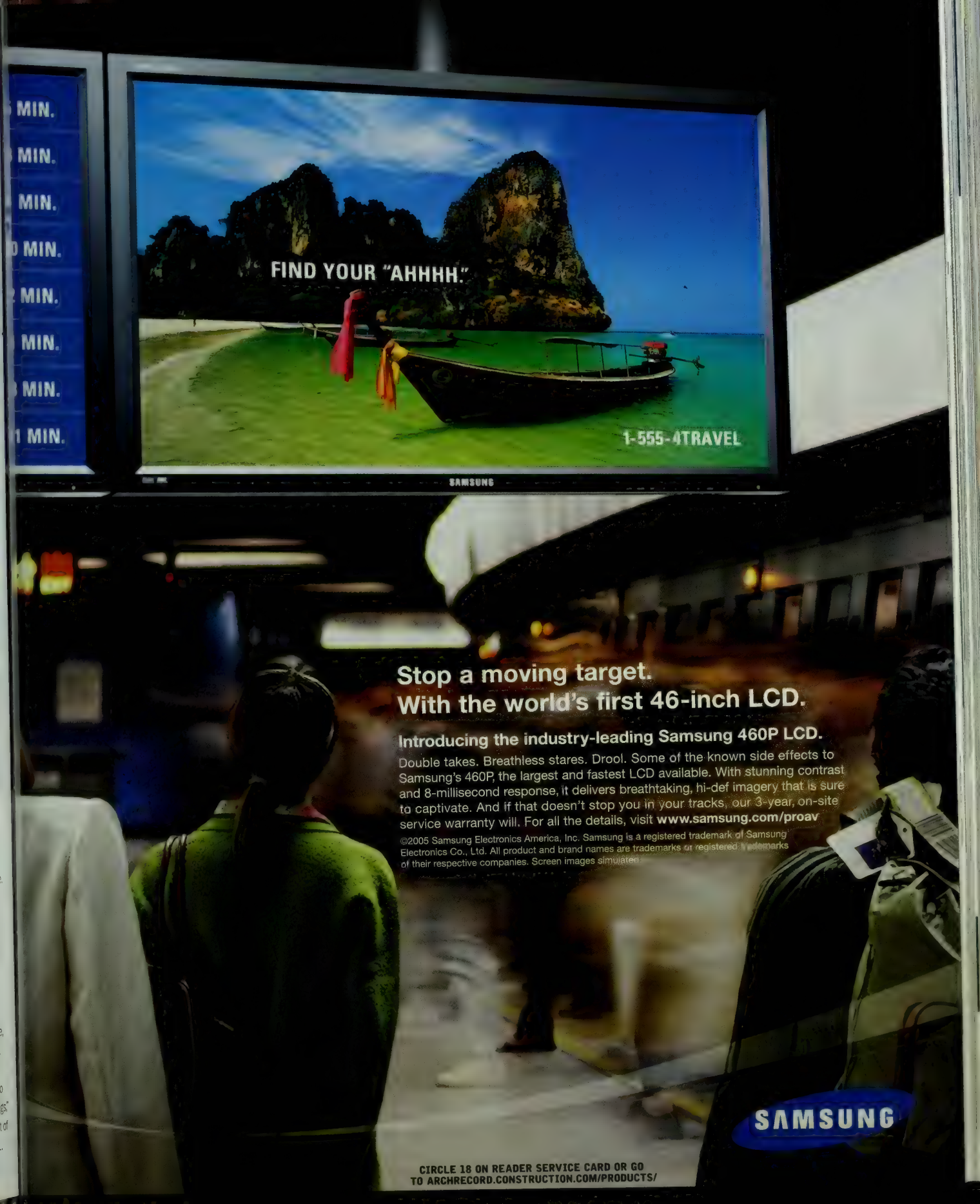


Two of Meier's Hudson River condos.

Richard Lang, public affairs director for the New York Landmarks Conservancy, says that many developers are considering purchasing historic buildings in the city's Flatiron district. Cass Gilbert's Austin-Nichols Warehouse on Kent Avenue in Williamsburg, Brooklyn, is also being converted by condo developers.

The Real Estate Board's Slattery argues that "it's just the nature of the evolution of the city," and a way for the city to adapt to the changing economy. Lang agrees, and notes that condominium owners often take better care of historic properties than owners who simply rent out space. But he says he mourns the loss of public access to many great buildings, and worries about the status of many historic interiors, which can no longer be landmarked once in private hands. The Plaza's owners claim they will preserve as much as possible, as do Metropolitan Life's owners. Exteriors, too, are at risk.

"There's not much you want to change. These are beautiful buildings," says Michelle LeRoy, vice president of investor relations at SL Green. *S.L.*


MIN.
MIN.
MIN.
MIN.
MIN.
MIN.
MIN.
MIN.
FIND YOUR "AHHHH."
1-555-4TRAVEL
SAMSUNG
Stop a moving target.
With the world's first 46-inch LCD.
Introducing the industry-leading Samsung 460P LCD.
Double takes. Breathless stares. Drool. Some of the known side effects to Samsung's 460P, the largest and fastest LCD available. With stunning contrast and 8-millisecond response, it delivers breathtaking, hi-def imagery that is sure to captivate. And if that doesn't stop you in your tracks, our 3-year, on-site service warranty will. For all the details, visit www.samsung.com/proav
©2005 Samsung Electronics America, Inc. Samsung is a registered trademark of Samsung Electronics Co., Ltd. All product and brand names are trademarks or registered trademarks of their respective companies. Screen images simulated.
SAMSUNG
CIRCLE 18 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Prison design boycott aims to slow growth of correctional facilities

Protesting what it calls the moral bankruptcy and rampant growth of our nation's prison system, San Francisco–based Architects/Designers/Planners for Social Responsibility (ADPSR) has organized a boycott on the design, construction, and renovation of U.S. prisons.

The group, which has about 300 members, began the boycott in September 2004 and has signed up just over 300 participants, most of them in the design fields (not all members of ADPSR). The group's president, Raphael Sperry, an architect at 450 Architects in San Francisco, says participants can help voice disapproval of the prison system's treatment of inmates, and its inherent racial and social inequalities. But he points out that the effort is meant most of all to help stem the incredible growth of prisons in the U.S. Sperry claims prison populations have grown almost sevenfold in the past 30 years, while he estimates that at least half the prisons in this country were built during that time.

Sperry says he doubts the boycott will quickly halt the creation of new prisons, noting that if architects stop work, then prisons could enlist engineers to construct them. But if the boycott takes hold, he says, the lack of new prisons will force officials to enact prison reform "instead of using prisons as a one-size-fits-all solution to social problems." He adds, "If we keep increasing the number of prisons, we'll never be able to deal with the real problems that lead to crime." He is quick to point out that the goal of the boycott is not, however, to let dangerous criminals out of jail.

Whether the boycott succeeds or not, Sperry, who emphasizes that he doesn't blame architects for prisons' problems (he notes most are trying to improve conditions but are part of a flawed system), is confident that the voice of architects could slowly begin to sway public opinion against the system and the proliferation of prisons. "If we want to realize our vision for what the built environment should be like, we need to take leadership," he says.



Are prisons becoming too plentiful?

Edward Spooner, chairman of the AIA's Academy of Architecture for Justice, says that while he admires Sperry's desire to take a stand on prison issues, he calls the boycott a "disservice."

"To abandon our clients and not build new facilities will have a disastrous effect on individuals who are inside," he says, noting that fixing the system's problems is a better idea than walking out on it.

"If I were to advocate something, I'd advocate building facilities that deal more effectively with the issues that the prison population is in the facility for." This includes a stronger focus on education, vocational training, and treatment services.

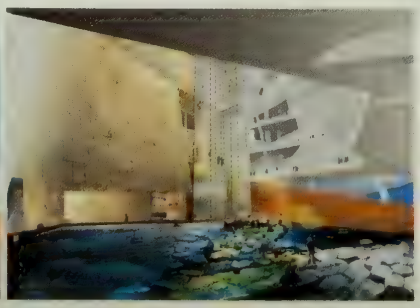
Spooner, who questions Sperry's figures (noting that prison-population increases keep up with overall population increases), adds that those involved with prison design and the prison system itself are doing everything they can to remedy problems. "This is a group of people with real understanding of the problems of prisons, and a sincere desire to do the best job they can. I don't think that the best job they can do would be to let all these people out on the street." *S.L.*

Canada welcomes major museum projects

Largely because of government spending priorities and low levels of philanthropic giving, decades can pass in Canada without the prospect of any new national museums. Yet as luck would have it, within three weeks this spring, New Mexico architect Antoine Predock won a competition to design the Canadian Museum of Human Rights in Winnipeg, Manitoba, and the new Canadian War Museum, designed by Moriyama & Teshima Architects, opened in Ottawa.

Predock's design, unveiled on April 15, will be set on a massive Tyndall limestone bed, rising 300 feet like a glass-enclosed rock formation, topped by a crystalline tower. The hard effect will be softened by local tall-grass plantings, trees, and a central plaza illuminated by electronic information-display panels. The museum is expected to cost nearly $240 million.





Predock's Museum of Human Rights will be topped by a crystalline tower.



The Canadian War Museum's copper walls.

Predock describes his design as "a tower of hope" and a "beacon for humanity." His design was also a beacon for the review committee, which chose Predock over two Montreal finalists, and from an original pool of 62 firms. New York museum planner Ralph Appelbaum will design exhibits, highlighting the global sweep of human rights struggles, including the creation of Canada's Charter of Rights. When the museum opens in three or four years, it is bound to be the most dazzling piece in the otherwise conventional architectural landscape of Manitoba's provincial capital.

Halfway across the country, the 440,000-square-foot Canadian War Museum in Ottawa opened on May 8. It too tells a story—of Canada's military history and the implements of war, recalling lives sacrificed in battle.

Moriyama & Teshima Architects, Toronto, were joined by Griffiths Rankin Cook Architects, Ottawa, in the design of the $104 million, low-profile museum. It rises about 75 feet above the nearby Ottawa River and features sloping glass walls and a copper-clad roof. The museum emphasizes sustainability, using river water for cooling, concrete made with recycled fly ash, low-maintenance roof grasses, operable windows, and energy-efficient HVAC systems. *Albert Warson*

Introducing the Era® Collection



KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

www.kimlighting.com

Made in America

HUBBELL® Hubbell Lighting, Inc.



CIRCLE 19 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/


Dramatic expanses
always intensify the beauty.
True™ Acoustical Ceiling Panels
Subtle. Soft. Serene. True™ Acoustical Ceiling Panels from USG are designed with a minimal grid reveal that creates stunning monolithic beauty to dramatize other design elements in the room. And with enhanced acoustical performance, the ceiling is as quieting as it is attractive. For more inspiration, visit www.usg-true.com or call 877 USG.4200.
While you're at NeoCon®, visit The Solutions Center℠ at USG. 3rd floor, 222 W. Hubbard, Chicago, IL.
USG
©2005, USG Corporation ©iconica/Andre Gallant 2005, all rights reserved

After 20 years, Chattanooga finishes riverfront development

Nearly 20 years after initiating a master-planning process with Cambridge-based Hargreaves Associates, the City of Chattanooga, Tennessee, is completing its waterfront redevelopment. Culminating in a three-year push by Mayor Bob Corker, the final stage includes expansion of the Hunter Museum of American Art by Randall Stout Architects; an expansion of the Tennessee Aquarium by Chermayeff, Sollogub & Poole; a series of public-art projects; the redesign of a state highway into a pedestrian-friendly parkway; and the addition of housing and retail. "We've built on our greatest resources, which are our outdoor amenities and our natural topography," says Todd Womack, communications director for the mayor's office.

A bridge to the Hunter Museum of American Art (below), with the recent expansion visible at the left.



The redevelopment has helped transform central Chattanooga from an after-hours ghost town into a vibrant district, but only after some communitywide soul-searching. The city of just over 150,000 realized that its compact size and setting could make it unique, and now it is held up for its progressive planning and walkability. "We realized that we weren't going to be a Nashville or an Atlanta," says Womack.

The 129-acre waterfront redevelopment cost approximately $120 million, almost all of which was raised privately. Stout's just-opened 28,000-square-foot addition to the Hunter Museum is the most architecturally adventurous piece of the redevelopment, with a curvilinear roofline and cliff-hugging form that contrasts with the symmetry of the museum's original Beaux-Arts mansion building, perched above the riverfront. The addition to the Tennessee aquarium, by Chermayeff, Sollogub & Poole, is more restrained, while modern riverfront parks, designed by Hargreaves, add new green spaces, a pier, better shorelines, and revamped streetscapes. The entire redevelopment strategy relies more on good urban design than on iconic architecture.

"We're building a city, not just a bunch of parks," says Womack. *Alan G. Brake*

MVRDV wins first-ever Marcus Prize



Rotterdam-based MVRDV has been selected as the first winner of the Marcus Prize, a biannual award for emerging architects established by Milwaukee's Marcus Corporation Foundation. The firm will receive $50,000, and an additional $50,000 will go to the University of Wisconsin-Milwaukee (UWM) School of Architecture and Urban Planning to administer the prize. Firm architects will act as guest critics at the school in spring 2006.

MVRDV was among 22 nominees from nine countries. "We really were looking for a person or group that was on a trajectory to greatness," says Bob Greenstreet, who is dean of the school and city planner of Milwaukee. He helped organize the award.

Founded in 1991 by Winy Maas, Jacob van Rijs, and Nathalie de Vries, MVRDV's work explores the relationship of density and place, especially in unique urban sites. Projects include the Dutch Pavilion for the World Exhibition 2000, and the Silodam housing complex, a multicolored cluster of buildings raised on stilts above Amsterdam's IJ River. MVRDV was a finalist for the New York City 2012 Olympic Village and the BBC headquarters in London. "The sites that MVRDV has dealt with in postindustrial cities with waterfronts are very similar to locations in Milwaukee," says Greenstreet, who hopes the firm will engage with his city's building community. The Marcus Corporation Foundation is the philanthropic arm of The Marcus Corporation, which owns and operates movie theaters, resorts, and hotels throughout the U.S. *John E. Czarnecki, Assoc. AIA*



Ice Hotel Sweden

Create dramatic expanses with True™ Acoustical Ceiling Panels from USG, and you could experience another dramatic venue—the Ice Hotel Sweden.

- Grand Prize is an 8-day trip to Sweden, including a night in Ice Hotel Sweden (Winter 2006-07)
- Entries will be accepted from March 1, 2005, through May 1, 2006
- Winners will be announced at NeoCon® 2006
- Visit www.usg-true.com for official rules and entry form

Win the True trip of a lifetime.

Call for Entries

USG

©2005, USG Corporation

INTRODUCING
WOOD
BALANCED
DOORS



Wood doors that use the renowned Ellison Balanced Door hardware and frames are now available. For information on wood selection and door design contact our factory.

ellison
Ellison Bronze, Inc.

800-665-6445
www.ellisonbronze.com

CIRCLE 20 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA recognizes top green projects

The AIA's annual contribution to Earth Day extended traditional categories, as the organization's Committee on the Environment (COTE) honored eight green building projects and for the first time recognized an urban plan. The institutional, residential, and civic projects address a broad range of environmental and social conditions without compromising on design, according to jury members.

The 2005 winners are the **Eastern Sierra Residence** in Gardnerville, Nevada, by Arkin Tilt Architects; the **Barn at Fallingwater** in Mill Run, Pennsylvania, by Bohlin Cywinski Jackson; **Rinker Hall at the University of Florida** in Gainesville, by Croxton Collaborative and Gould Evans; the **Pittsburgh Glass Center,** by Davis Gardner Gannon Pope Architecture and Bruce Lindsey; the **Austin Resource Center for the Homeless** in Texas, by LZT Architects; the **Evergreen State College Seminar II building** in Olympia, Washington, by Mahlum Architects; **Sarah Lawrence College's Monika A. and Charles A. Heimbold, Jr., Visual Arts Center** in Bronxville, New York, by Polshek Partnership Architects; and the **Leslie Shao-ming Sun Field Station** in Woodside, California, by Rob Wellington Quigley, FAIA. The committee also awarded a special commendation to the **Lloyd Crossing Sustainable Urban Design Plan** in Portland, Oregon, by Mithun Architects + Designers + Planners.

Selections reflect an expansive definition of environmental responsibility, including issues of equality and social responsibility, according to COTE chair Vivian Loftness, professor of architecture at Carnegie Mellon University. Among individual details, the jury appreciated LZT Architects' use of a water-storage tank as a sunshade for the Austin homeless shelter and Davis Gardner Gannon Pope and Bruce Lindsey's recycling of waste heat in the Pittsburgh Glass Center. *Ted Smalley Bowen*



LZT's Austin Resource Center for the Homeless.

Critics say National Trust helped doom St. Louis building

Critics of the National Trust for Historic Preservation say it supported the demolition of St. Louis's 108-year-old Century Building in order to save the city's Old Post Office Building. The Century, located across the street, was torn down to make room for a parking garage in February.

The 10-story, marble-clad Century was promoted as "the only marble office building in the West" when built in 1896. In addition to offices, the Beaux-Arts structure also contained a 1600-seat theater. The Old Post Office, a National Historic Landmark that dates to the 1880s, had for years been considered for major renovation. After reviewing parking options, the post office's tenants and developers fixed on the Century Building site. In 2002, the National Trust Community Investment Corporation, a for-profit subsidiary of the trust, allocated an $8.7 million tax credit to the project.

The Landmarks Association of St. Louis, an independent landmarks advocacy organization, contends that, through that credit, the trust essentially funded the Century Building's demolition. It filed four lawsuits against the project before the Century Building demolition proceeded. "We were stunned and disappointed. The [trust] abdicated its role in preservation and sound planning," says Carolyn Hewes Toft, Hon. AIA, executive director of the association.



The Century before the wrecking ball.

But the trust says it only helped fund the $45 million post office project. Before demolition of the Century, Richard Moe, president of the trust, said, "Demolition of the Century would be an unfortunate but necessary trade-off for the long-term benefit of the Old Post Office and its neighborhood." The Interior Department's designation of the Century to the National Register of Historic Places in October 2002 was not enough to stop demolition, and the parking structure is soon to be completed. *J.E.C.*

Meet the Door with a Split Personality

Power operation only when you need it.
Balanced door operation when you don't.



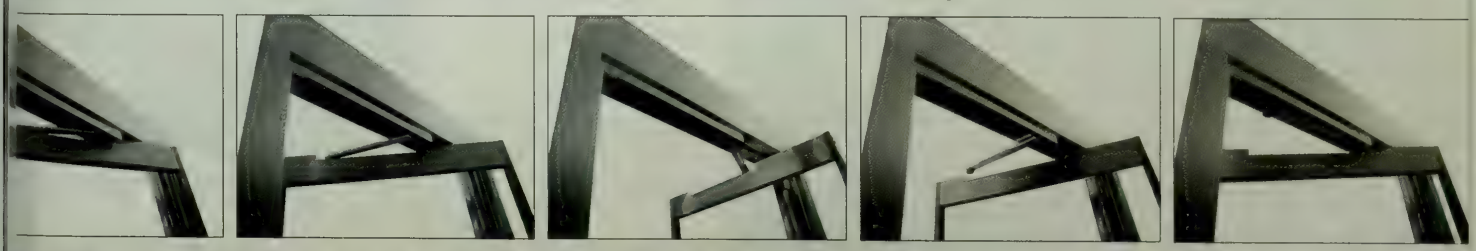
POWER NOW
Patent Pending

Power Now is a classic balanced door during manual operation, and opens with power only when needed. Our revolutionary design eliminates complicated, unsightly surface mounted hardware. A concealed low energy operator and actuating arm provide opening force on demand. Our standard hardware provides the closing force. When used manually Power Now is pure Ellison.

ellison
Ellison Bronze, Inc.
www.ellisonbronze.com

CIRCLE 21 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

)ower opens the door on demand, ellison closes it.



LAM
PERFORMANCE INDIRECT
FROM CEILING, WALL AND COVE



Choosing adjustable wall or ceiling luminaires? Find the choicest direct/indirect options from LAM: style, lamping, lumen output, light quality, aimability, damp/wet location for indoors and out. Precisely engineered optics in every fixture.
lamlighting.com

A JJI LIGHTING GROUP COMPANY

CIRCLE 22 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



ceiling attraction Lacking visual excitement overhead? Indigo from Ardee will shape things up... rewarding the eye as both *objet* and illuminator. 22" dish and cone reflector design produces pleasant, soft downlight. Dish with glass plate and opal acrylic cylinder broadly diffuses glarefree light. Compact fluorescents use 2/3 less energy than incandescents.

CIRCLE 23 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

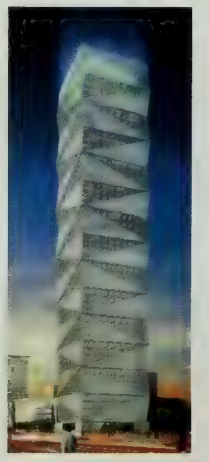
ardee
intelligent lighting...ardee lighting.com



Debate over foreign architects' roles in China intensifies

With the foundations being laid for long-awaited Chinese projects such as OMA (Office for Metropolitan Architecture)'s CCTV headquarters, and with projects like Paul Andreu's Grand National Theater in Beijing reaching completion, the ongoing debate about the role of foreign architects in the country has come into sharper focus.

Chinese academics and architects have in recent years criticized the eagerness of their countrymen to hire Western architects—which, like OMA, are establishing Chinese offices at an increased pace—noting that most foreign projects lack deference to the Chinese vernacular and are designed by architects with little connection to China. The outcry seems to have also sparked a sense of nationalism and insecurity.



SOM's planned Jinao Tower in Nanjing.

"[Chinese architects] suddenly see that their knowledge and architectural language, which they have inherited from their teachers and ancestors, isn't being put into use, and their role becomes subordinate," Ming Lu Gao, one of the 2004 Beijing Biennial's organizers, recently told *China Daily*, the state newspaper. Weiping Shao, chief architect of the Beijing Institute of Architecture and Design, notes, "Some local architects think [foreigners] bring good ideas to China and benefit the Chinese architectural market. But before, we had all the projects, and now we must share them."

Some of the most frequent complaints center on the projects now coming to fruition. Peigen Peng, professor of architecture at Beijing's Tsinghua University, has criticized CCTV headquarters as being too melodramatic for a city long known for its tranquil spaces and rectilinearity. The most disapproval, however, is reserved for Andreu's Opera House, a simple, curved pod-like form often accused of breaking from the disciplined order of its neighboring elements. "For Tiananmen Square, at that place, [buildings] should really be Chinese," comments Shao Fan, a rising Chinese designer.

Yet the foreign phenomenon is inevitable, says Yung Ho Chang, arguably Mainland China's most celebrated architect, who notes that the globalization of architecture is happening everywhere, not just in China. Chang himself is now working in South Korea and Japan.

Moreover, many agree that China does not have the resources to satisfy the demand for immense, innovative designs. "At the moment, the cutting edge is overseas," says Hong Kong's Rocco Yim, architect of the recently unveiled Guangdong Museum. Whether that will leave a positive imprint on China's traditional urban character (which Chang notes is quickly fading in the growing shadow of glass and steel) is an open question, he says. Adds OMA partner Ole Scheeren, "[China] is making enormous steps, and the natural situation is to look to the outside for help." *Daniel Elsea*



Herzog & de Meuron's Olympic Stadium plan.

LESSON: Thermal + Moisture Control

Specify cheap wall panels, and you could get soaked



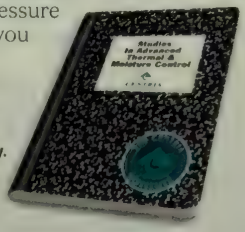




Only Formawall™ Dimension Series® joinery defeats water for good.

Why specify a metal wall panel that admits water into a building when there's a better way? Through extensive testing, only Formawall Dimension Series' patented horizontal joinery proves to defeat all five forces of nature that cause water penetration – gravity, capillary action, surface tension, kinetic energy and air pressure differentials. And, it defeats water without any exposed face-sealants that attract dirt and stain walls, only to crack and fail in short order. The only answer is factory-foam-insulated Formawall Dimension Series.

In fact, this joinery is so effective, that even when gaps are deliberately created in its interior protected seal, it prevents water penetration with 15 psf of negative pressure and 76 mph wind-driven water aimed directly at the joint. Now that you know, why would you specify anything less?



Learn more about avoiding moisture problems in exterior walls with the CENTRIA Institute's Studies In Advanced Thermal & Moisture Control. The handbook is free for architects, contractors and building owners with a phone call to CENTRIA today.

CIRCLE 24 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CENTRIA

www.CENTRIA.com

North America **1.800.752.0549** China **+86 (0)21 5831 2718** Dubai **+971.4.339.5110**

quiet down & lighten up
with QUILITE®



QUILITE®
INTERNATIONAL

Noise Barriers

A Post/Panel System of Polycarbonate Modules
Corrugated on Both Sides
for
Noise-cutting Performance
Light Transmission
Graffiti Resistance

8616 La Tijera Blvd, Suite 509, Los Angeles, CA 9004
Tel 310.641.7701 Fax 310.641.7768
info@quilite.com quilite.com

CIRCLE 25 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Symposium finds Saarinen's reputation back on the upswing

If the overflow crowd that showed up for the Eero Saarinen symposium at the Yale School of Architecture in early April is any indication, the roller-coaster ride of Saarinen's reputation is on the way up again. Though he was "the acknowledged leader of the first generation of American Modernists," as the architectural historian Vincent Scully said in his keynote address, as few as 10 years after Saarinen's sudden death in 1961 he was rarely mentioned in the press or academia.

"Many of us never studied Saarinen's buildings in school," explained Yale professor Eeva-Liisa Pelkonen, who organized the symposium. The event was sparked by a gift from the successor firm, Kevin Roche John Dinkeloo and Associates, of 500 rolls of drawings and 100 boxes of miscellaneous material to the Yale University Library Department of Manuscripts and Archives. The newly available archive has encouraged a series of research projects, which were previewed at the symposium. They will be featured in an exhibition called *Eero Saarinen: Realizing an American Utopia* opening at the Museum of Finnish Architecture in Helsinki next year.

Donald Albrecht, who is curating the exhibition, talked about some of Saarinen's many high-profile clients. Several graced the cover of *Time* magazine, including GM president Harlow Curtice, Yale president A. Whitney Griswold, IBM chairman Thomas Watson, Jr., CBS president Frank Stanton, and the former head of the FAA, Najeeb Halaby, who was the client for Dulles Airport.

Scully's keynote address, in turn, helped explain why Saarinen was so soon forgotten. Scully began by admitting the "derisive comments" he had made at the time. "In the 1950s, when Saarinen, Louis Kahn, Philip Johnson, and Paul Rudolph were dramatically redefining the strategies of modern architecture, I earnestly thought that what was important was the direction Kahn, and later Robert Venturi, were taking. But today, a generation of architects liberated by the computer find Eero's work compelling. Eero is clearly much more complex, more directly concerned with human use and meaning than I thought he was." He added, "I can neither defend nor deny my remarks some 30 years ago, but I still feel a twinge of guilt."



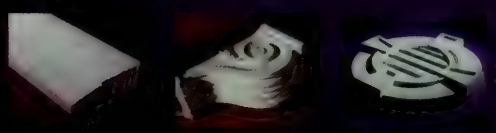
Saarinen's TWA Terminal at JFK airport.

Architect Greg Lynn further explained why interest in Saarinen has resurfaced. Showing pictures of Saarinen's buildings paired with those of Asymptote, Foreign Office Architects, and Ben van Berkel, he explained, "The problems [Saarinen investigated] don't have to do with computers. They have to do with calculus and drawing with curves. Eero was trying to fuse things." Lynn also showed why the gift of the archive was important, noting that when he had gone to see the buildings in his youth, he couldn't see the drawings or models that would explain how they were built. *Jayne Merkel*

With some acquisitions, it's hard to know who is ultimately the winner. For this one, might we suggest a mirror?

Style Solutions® Incorporated and FYPON® AMERICA'S FIRST CHOICE™

Now that Style Solutions® has acquired Fypon,® you may find yourself asking what it all means to you. You'll be glad to know the investment was made to offer you even more. By becoming the brand leader, the new Fypon® will offer you more of everything—more than 6,000 urethane millwork products, unparalleled quality from piece to piece, industry-leading five-day delivery times, excellent custom capabilities, and unbeatable customer service. And rest assured, you'll see many new products, like our Cellular PVC Trim. All supported by a knowledgeable and dedicated nationwide sales force. Because if this acquisition means nothing to you, it means nothing period. **800.446.3040**



are now FYPON®

FYAR0605T2

CIRCLE 26 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



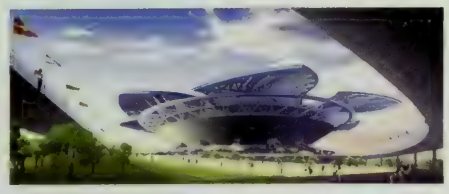
elegance, beauty, style... privacy

The Translucence Series™ Waterfall
Architectural water elements from
the premier maker of indoor waterfalls

Harmonic Environments www.HarmonicEnvironments.com 800.497.3529

CIRCLE 27 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Ambitious new tennis complex for Shanghai



The Association of Tennis Professionals (ATP), tennis's governing body, has announced that the Qi Zhong Stadium (right), the first phase of a new $200 million tennis facility in Shanghai, will be completed in September. When the second phase of the project is concluded in 2006, the Qi Zhong Tennis Center will be bigger than Melbourne Park, currently the largest tennis facility in the Asia Pacific region.

The main tennis stadium, with a capacity for 15,000 spectators, will feature a unique retractable roof soaring 130 feet high in the shape of an eight-piece magnolia. Each of the eight pieces of the roof will rotate when it opens, so that from above, it resembles petals on a symmetrical flower.

The project is being designed and built by a Chinese team, including the Xian Dai Architectural Design Company, the China Construction Third Bureau, Jiangnan Heavy Industry Company, and the Shanghai Mechanical Construction Company, which is responsible for the roof.

Located about 18 miles southwest of Shanghai, the 80-acre facility will host the Tennis Masters Cup for three years, starting with the November 2005 tournament. In addition to the main stadium, the facility will feature 40 indoor and outdoor courts, including a smaller, 8,000-seat stadium. *Jen Lin-Liu*

Updated film museum will be fit for projection

The Museum of the Moving Image in Astoria, Queens, recently unveiled plans for an expansion and renovation (below) by Brooklyn-based Leeser Architecture. The



project will nearly double the museum's current size, to 96,000 square feet, including new screening areas, an outdoor amphitheater, new galleries and storage, and new entrance and circulation spaces.

Virtually every surface in the addition will include moving images. Screens covering the elevators will simulcast pictures of museum occupants. The exterior will be clad by a thin metal scrim, providing another projection surface and blocking light into the galleries and theaters. Interior volumes, also set as screening spaces, will be formed by taking a continuous white plane, which architect Thomas Leeser likens to a film strip, and folding it up or down.

Many spaces will perform varied functions. Ramped galleries will serve as theaters and as vertical circulation areas, and a large multipurpose space will act as a lunchroom for school children and as a formal reception room.

Erected in 1920, the museum's building was once part of Paramount Pictures' studio system. Gwathmey Siegel redesigned the space when the museum opened in 1988. Construction on the $25 million expansion will begin this summer and last until 2008. *James Murdock*

Tile and stone should last forever...

The specification process should NOT!



Complete customizable specifications and details for successful ceramic tile and stone installation systems – ***in seconds!***

Request yours at **www.laticrete.com/ag**

LATICRETE®

Globally proven. Professionally endorsed.

www.laticrete.com • support@laticrete.com

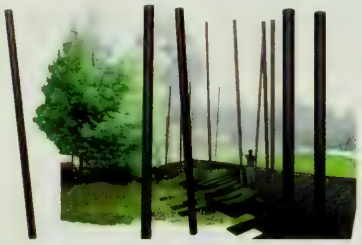
©2005 LATICRETE INTERNATIONAL, INC.
LATICRETE, LATAPOXY and the logo are Registered Trademarks of LATICRETE International, Inc.

A-1410-0405

CIRCLE 28 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

News Briefs

AIDS Memorial Grove getting new element The simple title "Living Memorial" belies the disturbing yet elegant landscape element for the National AIDS Memorial Grove in San Francisco's Golden Gate Park. Submitted by New York–based architects Janette Kim and Chloe Town, the winning project, chosen from more than 200 entries, sets up a jarring counterpoint to the lush green swale of the Grove, whose development has been ongoing since 1991. Evoking forest fires to underscore AIDS's devastation, a swath of the Grove will be lined by a fire-blackened wooden berm and occupied by a field of 24-foot-high black-carbon-fiber rods. Visitors can view the piece from a charred wooden platform, while benches made of wood recovered from forest fires provide repose. The rods, mirrored at their tips to reflect the sun, "serve as reminders of how many people have lost someone," explains Town. *Lisa Findley*



Carbon-fiber rods will line the Grove.

Libeskind's Sacramento building likened to Freedom Tower A new condominium tower in Sacramento, California, promises to add a distinct, but perhaps vaguely familiar, signature to the city skyline.

The 37-floor Aura, designed by Daniel Libeskind, has received criticism because of the sloping-roofed building's similarities to Libeskind's original tower designs for the World Trade Center site. Yama Karim, project architect, explains that any similar traits are driven by site conditions. All would be tall, slender towers that minimize shadows, allowing for maximum sunlight and views. Karim notes that Aura is constructed of concrete and glass (Libeskind's towers were steel and glass), while the facades, reflecting different uses—Aura, for instance will have residential balconies—are completely unalike.

Karim says that Aura will later be joined by two larger, much different towers. *Allison Milionis*



Too reminiscent of the Freedom Tower?

HOK designing new Washington, D.C., baseball park HOK Sport of Kansas City, Missouri, has been chosen to design a stadium for the new Washington, D.C., Nationals. On March 31, the D.C. Sports and Entertainment Commission chose HOK Sport, the lowest bidder by $4 million.

Some claim that the selection process, which did not include design presentations, was driven primarily by Major League Baseball's desire to ensure that a well-functioning stadium opens in 2008, within a $535 million budget. HOK Sport, designer of 10 of the last 14 Major League stadiums, was favored from the start.

"The choice was made on expertise," says Joe Spear, AIA, HOK Sport principal. He says he has "no specific design ideas yet," but will collaborate with local architects Devereaux & Purnell and city officials to find the best solutions. The commission, he says, "wants something different from everything we've done in the past. They think the stadium should be a Washington

A New Vision in Fire Rated Walls.



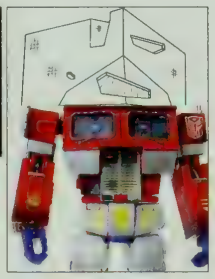
PyroEdge, StileLite, HighLite and Vision 60 System are registered trademarks of InterEdge Technologies. Pyrobel is a registered trademark of Glaverbel S.A. PYRAN® is a registered trademark of SCHOTT AG (Mainz, Germa

icon." *Andrea Oppenheimer Dean*

Scholarship fund will help cover registration costs To help individuals cover the $981 cost of taking the Architect Registration Exam (ARE), the National Associates Committee of the AIA has established the Jason Pettigrew Memorial ARE Scholarship Fund. The scholarship is named in honor of Jason Pettigrew, Assoc. AIA, of Colorado, who was a member of the initial National Associates Committee in 2001. Pettigrew died last July at age 29 in a mountain-climbing accident. He was working for Denver's SlaterPaull Architects and was in the process of taking the ARE at the time of his death. Contributions are now being accepted to build the fund's initial endowment. The AIA's goal is to provide at least one scholarship annually from the endowment. *J.E.C.*

Contest lampoons Walker Art Center Poking fun at Herzog & de Meuron's just-opened Walker Art Center expansion, Minneapolis underground newspaper *Citypages* and its Web site, citypages.com, recently hosted a contest called "What the Hell Does the Walker Look Like?" The competition challenged readers to draw sketches of what the much-praised but odd-looking museum resembles. Top prizes, awarded by the Walker itself, included dinner at the museum's restaurant and gallery passes. Entries depicted the Walker as Elvis, Darth Vader, a Transformer, a climbing wall, and a lunchbox, to name a few. "It's a really rich arts community," says Corey Anderson, online managing editor at citypages.com, who organized the contest. "I couldn't wait to see what people cooked up." *S.L.*





Walker contest entries depict the museum as Darth Vader (above) and a Transformer (right).

Four partners leave Chong Partners Four senior partners at one of San Francisco's largest and most respected firms, Chong Partners Architecture, are leaving to form their own practice. The firm, founded by former AIA president Gordon H. Chong, AIA, is well-known for its health-care and education work. Former partners Jeff Warner, John Ruffo, Sam Nunes, and Bryan Shiles, after trying for years to come to an agreement with Chong over a transition plan for the firm, launched their new practice, WRNS Studio, in early May. Chong Partners, founded in 1978, continues with 180 employees, 65 of them architects. *L.F.*

Quilt center in the works Robert A.M. Stern Architects is designing the International Quilt Study Center for the University of Nebraska. The unique museum, which will sit within a fabric-inspired pattern of pavers, will be made of limestone and have a bowed-glazed facade composed of glass panels "stitched together" to create a quilting pattern. Opening is scheduled for fall 2007. *S.L.*



Stern's planned Quilt Study Center.

ENDNOTES

- Norman Kurtz, chairman of the engineering firm Flack + Kurtz, died on May 13 at the age of 69.
- Office For Metropolitan Architecture (OMA) and Gruen Associates have been selected to design the California Institute of Technology's new Walter and Leonore Annenberg Center for Information Sciences and Technology in Pasadena.
- David Thorman, AIA, has been named California State Architect.

Introducing the newest solution in fire rated glazing from InterEdge!

Imagine an entire fire rated wall uninterrupted by vertical framing! The Vision 60 System is just that—a fully glazed 60-minute transparent wall with no intermediate framing. Each panel of Pyrobel-60 fire rated glazing is separated by a slim silicone caulking, offering truly free and open vision for your projects. With numerous framing options available, this system is ideal for transportation facilities such as airports, retail centers, commercial office buildings, hospitals, schools and any other location where uninterrupted viewing is desired. Take your projects from ordinary to spectacular with the Vision 60 System!

For the most up-to-date information on our entire suite of fire rated solutions, including maximum glazing sizes, framing details, CSI specs, and project photos, please call us at **1.877.376.3343** or visit us online at **www.firesafe-glass.com**.

InterEdge™ Glazing

Pyrobel™ Glazing

PYRAN® Star

PYRAN® Crystal

Stainless Frames

Hybrid Frames

Vision 60 System

INTEREDGE TECHNOLOGIES
An AFG Glass Company

AFG GLASS

CIRCLE 29 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Vision for Life. Vision for Safety.
Fire Rated Glazing Solutions for All Your Visions.

You can already tell exactly what kind of house it's going to be.



©2005 Marvin Windows and Doors. All rights reserved. ®Registered trademark of Marvin Windows and Doors.





The right windows and doors help bring your plans to life beautifully. Specify Marvin, and you're assured of complete design flexibility and better-performing windows and doors with superior aesthetics. That includes furniture-grade interiors, consistent sight lines and the tightest tolerances possible — along with countless design options, from cladding profiles to hardware choices.
Call 1-800-236-9690 or visit **marvin.com**

MARVIN
Windows and Doors

CIRCLE 30 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



STRATICA®

FROM AMTICO INTERNATIONAL

For all the right reasons.

Stratica is specially developed to improve the quality and conditions of our indoor environments. The ideal flooring prescription for healthcare facilities, Ecopolymeric™ Stratica is unlike any other flooring.

- Ecopolymeric, PVC and formaldehyde-free
- Virtually VOC-free for improved indoor air quality
- Wax-free for less maintenance and cleaner wastewater
- Dupont Surlyn® wearlayer for superior durability
- Stratica contains post-industrial recycled content

To find out more, call 888 268 4269 or visit www.stratica.com

CIRCLE 31 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

For and about the emerging architect

archrecord2

In Los Angeles, even the weather can seem stage-managed—so it's no surprise that the creative community flourishes there, whether because of or in spite of this. Architects in the City of Angels have always prided themselves on challenging norms, and the firm we profile in Design, null.lab, is no different. We jet off to Denmark in Work to see what happens when young artists from cities as far-flung as Beijing and Brussels are given a hotel to redesign.

Design

A firm called null explores the unknown



The founders of Los Angeles–based null.lab, Arshia and Reza (left and far left—and yes, they go only by their first names), adopted the firm's name because it's both specific and vague—in other words, slightly dysfunctional. "A lab is obviously a place of experimentation, where the process is valued as much as the result," says Arshia. The concept of null, he adds, indicates not so much "nothing" as the unknown. Perhaps that hints at the undefined territory he and Reza explore when they begin each project, but that's one of many possible interpretations. They'd prefer to let us draw our own inferences.

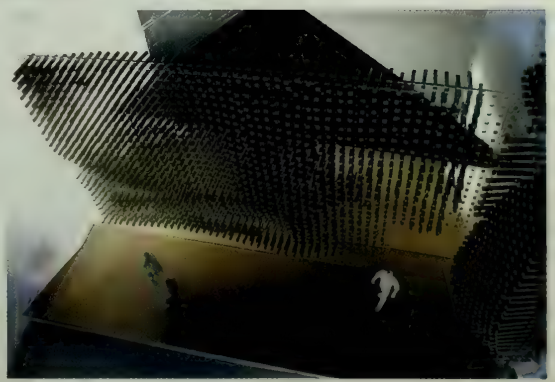
This open-ended approach is reflected in their design philosophy, which could bear the tagline "Against Functionalism." Arshia says, "In architecture there's a bias about the way space is used—that use should be predetermined by function or form or program. We want to defunctionalize architecture in this way. We'd prefer that people engage with our projects like natural spaces—to be able to pick out where they're most comfortable doing various things, whether it's sitting or working or reading, as they would in a park." Reza also cites natural systems as a model. "We want to design in the same manner that nature generates life—DNA, for instance, has the same structure but results in very different-looking organisms. We're interested in creating complex spaces generated by simple, straightforward rules." They think of themselves as makers of space rather than architects, a term they find too restrictive; both have dabbled in—and are fascinated by—film and new media.

The partners knew each other for several years before forming null.lab in 2002. Both were born in Iran. Arshia, who lived in Baltimore briefly as a child in the 1970s, studied architecture at Shahid Beheshti University in Tehran and practiced there afterward, designing commercial and residential projects and winning awards for both built and unbuilt work. Reza, whose family



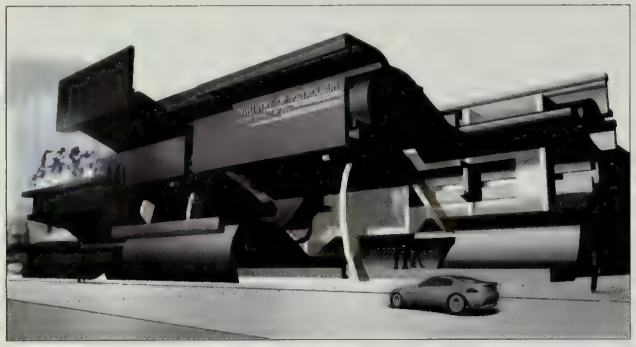
Bobco Metals, Los Angeles, 2003
At this downtown fabrication shop, null.lab used bent and folded metal surfaces that seem to explode in shards from fixed points—like the violence that has plagued downtown L.A. The project won a 2004 Honor Award from AIA Los Angeles.





Sunset Landmark Building, West Hollywood, 2005
null.lab is designing a 1,200-square-foot interactive LED installation at a prominent site next to the House of Blues on Sunset Strip. The project would commemorate the 20th anniversary of the establishment of West Hollywood as a city independent of Los Angeles.

Ministry of Petroleum Headquarters, Tehran, Iran, competition entry, 2002
The ministry hosted a competition for a monumental building. Arshia and Reza imagined a complex system of spaces for meetings, conferences, and offices. The headquarters was never built.



moved to Columbus, Ohio, when he was 10, earned his degree at SCI-Arc in 1991 and spent much of the next decade working for a who's-who list of Los Angeles architects: Frank Gehry, Thom Mayne, Eric Owen Moss. He and Arshia met in Tehran in the mid-1990s, where Arshia was working for Shirdel/Kipnis as a project architect for the Tehran International Airport, and Reza was employed briefly as a form-maker. When Arshia moved to Los Angeles in 1997, they reconnected, even working together a few times for Michele Saee and others. Now they work side by side at a few makeshift, poorly lit work tables in a huge, raw loft space near SCI-Arc, which seems more 1970s SoHo than City of Angels.

Though Arshia and Reza describe null.lab as a nontraditional firm, that doesn't seem to be scaring away clients. In fact, their projects downtown and on Sunset Strip involve some of L.A.'s top developers and planners. If the recent honor award from AIA Los Angeles for Bobco Metals (see previous page) is any indication, null.lab seems poised to become a stalwart of an emerging generation of avant-garde designers in a city that has always attracted iconoclasts. The unknown, after all, holds infinite possibilities. ***Deborah Snoonian, P.E.***



15th Street Lofts, Los Angeles, 2005
Developer Western Imperial tapped null.lab to create 99 loft-style apartments in a 1920s brick building downtown. The architects are transforming the facade with active signage and perforated metal.

For more photos and projects by null.lab, go to architecturalrecord.com/archrecord2

Work

Rooms serviced: artists redesign a nondescript hotel

Thanks to a clever publicity campaign by automotive giant Volkswagen, design-conscious travelers now have an artful place to stay in the heart of Copenhagen.

As part of a promotional scheme entitled "Project Fox" for the new VW Fox vehicle, the company invited 21 young artists from around the globe to make over the rooms at the Brøchner Hotel in Copenhagen, one of a Danish chain by the same name. Given four months to complete what was dubbed "Hotel Fox," the group of illustrators, graphic designers, and artists responded enthusiastically, changing the furniture, carpets, and wallpaper in 61 rooms to suit their fancy. The result is as varied as their creators' backgrounds. One room resembles the interior of a log cabin in the hills of Switzerland; another is stark and spare, with letters that seem typed onto the walls; a third boasts a lush textile backdrop replete with fanciful woodland creatures.

Volkswagen officials say they launched the campaign in early 2005 both to promote the VW Fox and to showcase emerging talent in a variety of creative fields (the company also sponsored events for rising-star chefs and hotel managers). After a three-week media frenzy at the Hotel Fox in Copenhagen, the journalists and artists have all gone home—but happily, anyone can now stay in the redesigned rooms. ***Randi Greenberg***







Examples of the 61 unique rooms at Hotel Fox, which were redesigned by an international group of young artists (clockwise from above): Kinpro/Japan; Antoine et Manuel/France; Speto/Brazil; Friends With You/USA.



See more redesigned rooms at the Hotel Fox by visiting archrecord.construction.com/archrecord2/

Recognize these individuals?

Clark

Gamble

Hammerstein

Wilbur

Roebuck

Packard

Robbins

Schuster



ON

S™

CIRCLE 32 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Ministry of Petroleum Headquarters, Tehran, Iran, competition entry, 2002
The ministry hosted a competition for a monumental building. Arshia and Reza imagined a complex system of spaces for meetings, conferences, and offices. The headquarters was never built.





15th St
Los Ang
Develop
null.lab
apartm
ing dow
transfor
signage

Work

Rooms serviced: artists redesign a

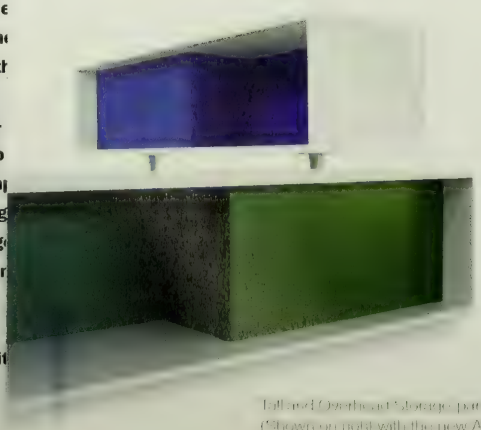
Thanks to a clever publicity campaign by automotive giant Volkswagen, design-conscious travelers now hav an artful place to stay in the heart of Copenhagen.

As part of a promotional scheme entitled "Project Fox" for the new VW Fox vehicle, the company invited 21 young artists from around the globe to make over the rooms at the Brøchner Hotel in Copenhagen, one of a Danish chain by the same name. Given four months to complete what was dubbed "Hotel Fox," the group of illu trators, graphic designers, and artists responded enthu astically, changing the furniture, carpets, and wallpape in 61 rooms to suit their fancy. The result is as varied a their creators' backgrounds. One room resembles the interior of a log cabin in the hills of Switzerland; anothe is stark and spare, with letters that seem typed onto th walls; a third boasts a lush textile backdrop replete with fanciful woodland creatures.

Volkswagen officials say they launched the campaign in early 2005 both to promote the VW Fox and to emerging talent in a variety of creative fields (the com sponsored events for rising-star chefs and hotel manag three-week media frenzy at the Hotel Fox in Copenhag nalists and artists have all gone home—but happily, ar now stay in the redesigned rooms. *Randi Greenberg*

See more redesigned rooms at the Hotel Fox by visit archrecord.construction.com/archrecord2/

INTRODUCING WORKPLACE DESIGN THAT LEVERAGES THE UNIQUE
power of the pair.
you
you + i



Tall and Overhead Storage, part of the new Duo™ portfolio of products. (Shown on right with the new Antouch™ Adjustable Worksurfaces.)

Lewis & Clark

Procter & Gamble

Rodgers & Hammerstein

Orville & Wilbur

You do now.

Sears & Roebuck

Hewlett & Packard

Baskin & Robbins

Simon & Schuster



'ON

SS™

CIRCLE 32 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Ministry of
Headquarte
competition
The ministry
for a monun
Arshia and I
plex system c
conferences,
quarters was



Work

Rooms s

Thanks to a c
giant Volksw
an artful pla

As part
Fox" for the r
young artists
rooms at the
Danish chain
complete wh
trators, graph
astically, cha
in 61 rooms t
their creators
interior of a l
is stark and s
walls; a third
fanciful wood

Volkswa
paign in early
emerging tal
sponsored ev
three-week n
nalists and a
now stay in th

See more re
archrecord.c

VIRTUALLY ALL CHANGE IS THE RESULT OF TWO PEOPLE WORKING TOGETHER.
Why not design to make it happen?









Research argues that companies' entrepreneurial and strategic actions are driven, literally, by pairs of people. And, that working in pairs is key to better learning, improved negotiation, problem solving, and most importantly – innovation. Our designers have used this insight to rethink the individual workspace. The result is new products and applications that support not just individuals or groups, but dyads, or pairs. Products that help create visual privacy and manage interruptions, while promoting spontaneous brainstorming and quick access to materials and power. We've focused on making it easy for people to transition smoothly between "I space" and "You and I space," reflecting the ways they spend nearly 80% of their workday. Learn more about this revolutionary new way of looking at the workplace at steelcase.com/duo.

Call your authorized Steelcase dealer
or 800.333.9939 www.steelcase.com

Steelcase®

Do what you do better.

©2003 Steelcase Inc.



New Pilkington **OptiView**™ Anti-Reflective Glass

With two advanced-technology pyrolytic surfaces and a laminated core, Pilkington **OptiView**™ Anti-Reflective Glass reduces reflections – both from the outside *and* inside – to less than 2%, blocks over 99% UV transmittance, and still allows more visible light to pass through than even clear float glass!

The result is a unique fabricated glass that combines the strength, security, safety and sound reduction of laminated glass with the low-reflectivity of a high-end specialty product.

And when you combine that with its large size capability and the fact that it can be tempered and bent like ordinary glass, Pilkington **OptiView**™ Glass is not only ideal for museums and displays, but a practical choice for retail storefronts, showrooms, and a host of applications where an anti-reflective product was never possible before.

It's just one more example of Pilkington's advanced technology glass products. To find out more, call us at 800 221 0444, or visit www.pilkington.com.

Pilkington **OptiView**™ Anti-Reflective Glass.

It's the most amazing glass you'll never see.

PILKINGTON

First in Glass™

Pilkington Building Products North America 811 Madison Ave., P.O. Box 799 • Toledo, OH 43697-0799 • Domestic Sales: 800 221 0444 • International Sales: 419 246 4943
Main Office: 419 247 3731 • Fax: 419 247 4517 • E-mail: building.products@us.pilkington.com • Website: www.pilkington.com

©2005 Pilkington. Actual photo comparing reflectivity of clear float glass and Pilkington **OptiView**™ Anti-Reflective Glass. Due to printing and reproduction limitations, photo may not represent actual glass colors.
Pilkington **OptiView**™ Glass and First in Glass™ are trademarks of Pilkington.

CIRCLE 32 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



MAKE THE WORLD GO AWAY. OR NOT.

Privacy versus light on an inside office can be a major debate. Now, with our new Variable Privacy™ Door, you can offer the best of both worlds. With blinds built right into the glass, simply slide the lever and have instant privacy, or added light with a view. Part of our Marshfield Signature Series.™ Marshfield DoorSystems, **Opening Doors to Unlimited Possibilities** for over 96 years. 1-800-869-3667 ext. 2322. marshfielddoors.com

Marshfield DoorSystems

CIRCLE 33 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Architecture as symbol generates a hot debate among our critics

Critique

By Michael Sorkin

Editor's note: In his most recent Critique [RECORD, April 2005, page 101], Robert Campbell criticized former MIT president Chuck Vest for saying that buildings at the school "should stand as a metaphor for the ingenuity at work inside them." Michael Sorkin responds.

Dear Bob,

I've just returned from a weekend at MIT, my first extended visit in years: had a good look around, saw new buildings, met old colleagues. I also happened to read your column while I was there, and I couldn't disagree with you more.

To begin with, why this anxiety with the idea of the metaphorical or, more properly, symbolic role of architecture? Do you really believe that architecture should be purged of directed meanings? Do you think that Chartres Cathedral makes a mistake in its heavenward aspiration and iconographic encrustation? Do you wish that the Einstein Tower were just a little more generic? That Legal Seafood should leave portholes alone? Indeed, do you really think that the domes, stairs, and Classical columns of Welles Bosworth's designs for MIT are simply a neutral "brown" wrapper because they're a bit more butch than the Pantheon?

Clearly, you don't. You describe this architecture as "denotative" of the "commonality of the present and the past," and, presumably, of strength and tradition, civic consequence, ruling-class solidarity, and deep roots in the Western canon. Your cavil seems to be not with the idea of symbolic content, but with the expressive particulars of those new buildings, their message. But why shouldn't MIT—the virtual Vatican of ingenuity—seek to express itself through works of architecture that are themselves formally and technically ingenious? Reading between the lines, I suspect the issue might grow from a fantasy of the apt modesty of the technical mind and its disdain for flamboyance. We like our scientists with chalk on their pants and elbows poking through their sleeves. Many liked the tumbledown, temporary Building 20, a wooden barracks dating from the Second World War, better than its expensive and formally elaborate successor [Gehry's Stata Center], just as most of us prefer the studiously casual uniforms of the American general staff of the same era to the drag-queen outfits of the Germans.



Frank Gehry designed the Stata Center corridors as interior streets.

Aspirational architecture

In fact, both styles are rich in meaning—equally, if dissimilarly, connotative of attitudes to hierarchy, tradition, and warfare—distilling the difference between Germanic *Soldatentum* and what had been our own reluctance to militarize (talk about nostalgia!). One might question either message, but not their mechanism: Taste can be bad, but not wrong, certainly not in terms of a logical category like fallacy. Chuck Vest, who was president of MIT when you quoted him, was certainly within bounds to express his hopes for the university he directed in aspirational terms: His call for ingenious architecture was surely just another way of describing a desire for "great" buildings on campus.

True, symbolism can be craven and dopey, and there are plenty of instances of poor and misleading translations of meaning into architecture. The Dr. Evil pinkie sticking up from the Freedom Tower to evoke a huge but expressively shriveled Statue of Liberty. The green roof on the Ford Rouge plant, a good idea transformed into a monument to craven hypocrisy and camouflage for the environmentally nefarious product being produced underneath it. And yes, we do seem to prefer the billowy, choose-your-own-metaphor abstraction of Gehry's undulating period to more literal ducks.

But hey, de gustibus! I think you most misread the new buildings not in iconic but in performative terms. You favorably contrast the original MIT complex with the new additions by calling it "corridor positive." This is

Contributing editor Michael Sorkin is the director of the urban design program at the City College of New York.

a nice observation, one that foregrounds the importance of the network to the meaning of the campus. But both Stata and [Steven Holl's] Simmons Hall are extremely corridor positive, each making a serious effort to expand the meaning and content of the corridor. This is something of a tradition at MIT, where Aalto's Baker House—the greatest building on campus, indeed in Cambridge—offers that glorious straight-run stair, a rising corridor that functions as a social condenser and a sublime means of ascent.

The same effort to extend the corridor to a role beyond horizontal circulation is clear at Simmons in places where the "corridor" ascends through those troglodyte multistory common spaces, allowing residents to overcome the limits of floor-based affinities by producing a more three-dimensional space of interaction (and the kids love it!). Stata is structured around a complex interior street, extending the idea of the corridor to embrace a variety of forms and functions and initiating a complex (but surprisingly clear) system of circulation. This produces a more irregular, "medieval" pattern with a capacity to generate spaces of accident and encounter, substantially exceeding the grid scheme of the Bosworth buildings. While the old buildings provide a wonderful network of flows, the uniformity of their section yields little opportunity for repose.

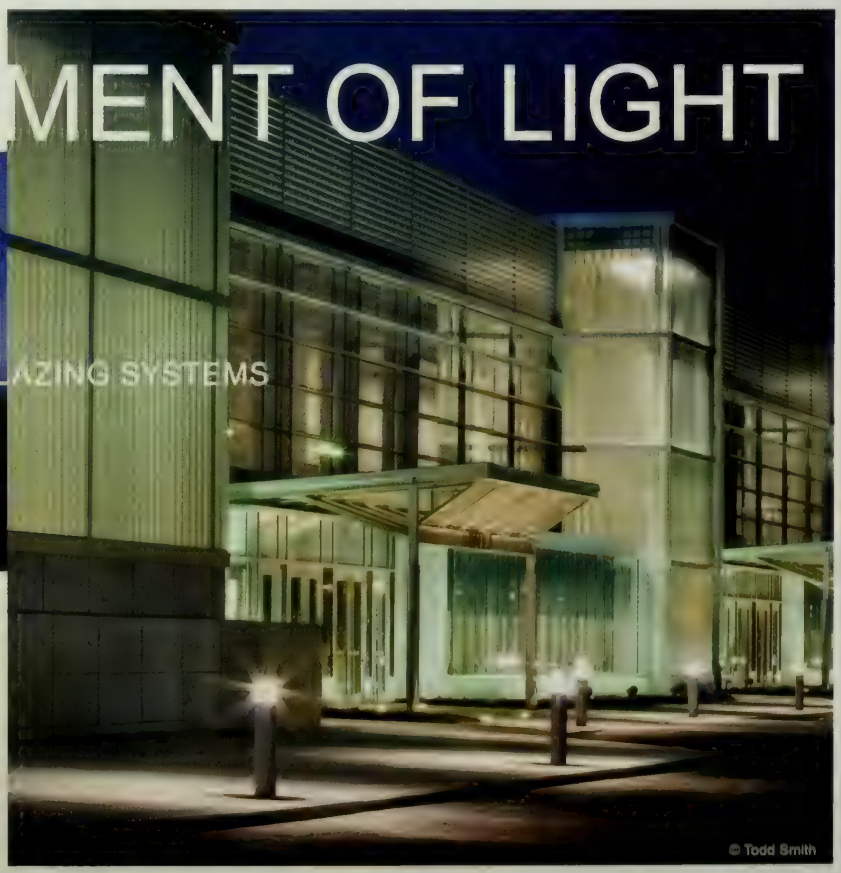
Your remark that most people prefer loft spaces to "audacious metaphors" suggests that flexibility grows from generality, from providing a setup for the "equipotentiality" of subdivision. But flexibility can also be the outcome of assembly, and this is surely the message of both the larger aggregation of the MIT campus and the collage that underlies the elegant plan and complex section of Stata.



At Simmons Hall, Steven Holl tried to expand the meaning of the corridor.

Pilkington Profilit™
MANAGEMENT OF LIGHT





Efficiently manage light, visibility and energy by incorporating **Pilkington Profilit™** in your building design. Profilit products can meet your design requirements through a combination of alternative surface finishes, performance coatings and specialized installation materials.

Established 1873
WESTCROWNS INC.
910-579-4441
www.westcrowns.com
dtodd@westcrowns.com

CIRCLE 34 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

alcoaarchitecturalproducts.com

ALCOA



Now Available in XXL.

Just one of the many strengths of Alcoa Architectural Products' New Reynobond® XXL.

Want the strength and performance of Reynobond, but need wider ACM panels? *Your solution is here.* Reynobond XXL offers all the benefits you love. Like incredible flatness. Admirable durability. A superb strength to weight ratio. And design-inspiring flexibility. Only now they come in impressive 78 ¾" panel widths—enhancing your ability to combine Reynobond with other substrates and materials that are over five feet in width. So live large. Spec Reynobond XXL for your next project—and get more panel for your money.

Alcoa Architectural Products | build for life

For more information, contact Alcoa Architectural Products (800) 841-7774. Or visit us online at alcoaarchitecturalproducts.com.

©2004 Alcoa Architectural Products

CIRCLE 35 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Here, malleability is the by-product of variety rather than uniformity, and the success of the strategy can be read in the almost insane variety of uses—from classes in philosophy to studios for guided-missile design—the building houses. At Stata, a change of use requires the search for an appropriate space or series of spaces rather than the serial redesign of big rooms. And to cite another happy paradigm, the building's design has strong affinities with the near-neural patterning of the Oxbridge model, with its engagingly wiggled eccentricities. Indeed, the brain seems a more interesting model than the factory for this virtual age. And this sort of labyrinth, you are right to observe, has nothing to do with the style of the hat that keeps the gray matter warm.

Finally, what's this about the lack of an iconic outdoor space? While the MIT campus doesn't congeal into a singular, instantly legible space like Harvard Yard or the Piazza Navona, it has a particularly urban quality, with elaborate networking and extensive distribution of common spaces. This parti produces both rich connections and strong set pieces. Among the latter are the plaza that joins Eduardo Catalano's student center and the two beautiful Eero Saarinen buildings, Bosworth's great lawn on the Charles, the space that flows around I.M. Pei's Green Building, and the emerging Vassar Street corridor. While these may not evoke the pastoral feelings of privilege and prestige that crossing the Yard on a crisp winter morning inspire, to say that these spaces play "little role in the life of the inhabitants" is simply wrong. The network, with its animating diversity, is both iconic and rich in terms of use and interaction. The greatness of this campus is the result of a stimulating collision of paradigms, not the domination by one.

THE BRAIN SEEMS A MORE INTERESTING MODEL THAN THE FACTORY FOR BUILDINGS IN OUR VIRTUAL AGE.

How the campus progresses from a formal central core to a series of peripheral dissolutions has long been the critical issue for expansion, whether into the mixed-scale industrial and residential surroundings to the west and south or the burgeoning high-tech theme park to the east and north. The MIT campus is so remarkably urbane, in large part because it is formed in reaction to the unpredictable and unfolding complexity of its surroundings. I find these diverse interactions far more stimulating than, for example, the megalomaniac uniformity that is likely to result from Harvard's expansion into Allston.

Funny that your concluding quip about typography so directly evokes Victor Hugo's claim that the book had become the assassin of the public iconographic meaning of architecture. Setting aside the history of manuscript illumination and expressive typography (I assume the "modern" sans-serif face used in RECORD does not dissolve your intended meanings), I believe you founder on the old *langue/parole* distinction, among others. The question of expression does not ultimately devolve on typography, but on your writing, the real medium for the expression of your ideas. Sloppy execution by the contractor—like garish letterforms—can harm architectural expression, but it isn't the source of the problem any more than Chuck Vest's metaphor of ingenuity is for what's going on architecturally in those projects you so dislike.

By the way, do you wear a tux when the event calls for black tie? Do you find that people take your ideas more seriously if you do? Do you have more fun? ■



CIRCLE 36 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

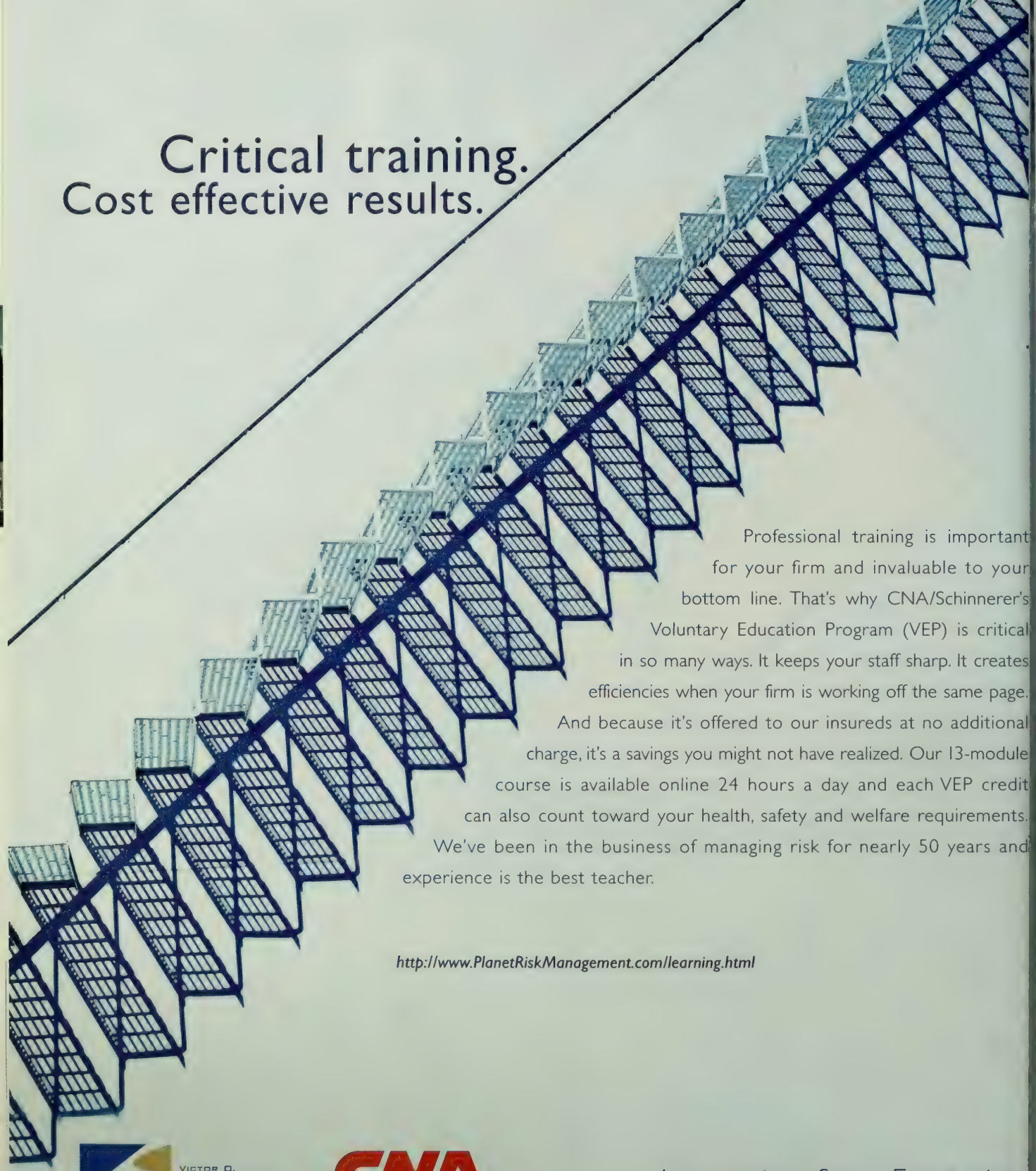
Not every building is super complex, or shaped like a lug nut. That's why we offer **scalable** solutions to fit your specific construction or retrofit needs. A leader in systems integration and technology contracting, we have the dedicated system specialists to provide you with the flexibility, speed and responsiveness you demand. So even if you fall a little short of needing an army, we won't fall short meeting your needs. To find out more, call 1-800-972-8040, ext. 595.

JOHNSON CONTROLS

CONSTRUCTION | SERVICE | FACILITY MANAGEMENT | FIRE ALARM & SECURITY | TECHNOLOGY | SYSTEMS INTEGRATION | ENERGY

www.johnsoncontrols.com

CIRCLE 37 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Critical training.
Cost effective results.

Professional training is important for your firm and invaluable to your bottom line. That's why CNA/Schinnerer's Voluntary Education Program (VEP) is critical in so many ways. It keeps your staff sharp. It creates efficiencies when your firm is working off the same page. And because it's offered to our insureds at no additional charge, it's a savings you might not have realized. Our 13-module course is available online 24 hours a day and each VEP credit can also count toward your health, safety and welfare requirements. We've been in the business of managing risk for nearly 50 years and experience is the best teacher.

http://www.PlanetRiskManagement.com/learning.html

Victor O. Schinnerer & Company, Inc.

CNA

Innovation from Expertise

CNA is a service mark and trade name registered with the US Patent and Trademark Office. The program referenced herein is underwritten by one or more of the CNA companies. This information is for illustrative purposes only and is not a contract. ©2005

CIRCLE 38 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Snapshot



By Beth Broome

Worshiping in the modern spirit of a bygone era

From the moment it was completed in 1964, the Central Methodist Church made its mark as a modern icon in California's flat Central Valley. Today, 41 years later, the Stockton church is still a landmark. While some have come to refer to it as "the beached whale," love for the building has only grown in the heart of the congregation.

Central Methodist first approached San Francisco–based architects Anshen+Allen after seeing the firm's Chapel of the Holy Cross in Sedona, Arizona. The church was looking for a design marked by simplicity that would express its social as well as spiritual community, says Derek Parker, the project designer. Fifty-seven concrete bents cast on-site in the same shape at different heights form the building's frame. Rising to 85 feet at the chancel, the roof, made of heavy planking with thick redwood shakes, swoops down into overhanging eaves that shield the structure from the California sun. Fellowship hall, kitchen, and administration areas are on one side of the open-air atrium; the sanctuary, on the other.

More than 35 years later, the church once again approached Anshen+Allen. The ravages of time and the need



As it did when it was new, Central Methodist Church continues to inspire awe. The church as it appears today (above), and the open-air entrance in the 1960s (right).



for updating called for an intervention. By now, the firm, previously known for its Eichler homes and contemporary churches, had shifted its focus to larger-scale academic and health-care projects. Nonetheless, it embarked on a two-phase renovation plan. While a relationship that extends over such a long period is rare, Felicia Borkovi, principal in charge of the renovation, says, "Involving the architect of record is key to getting an intervention that works with the original architectural design intent."

Both client and architect agreed on the importance of leaving the design itself mostly untouched while replacing the roof, updating the lighting, acoustics, and mechanical systems, and allowing for ADA accessibility. Steps were also taken to address the changed needs of the much-reduced congregation, and to reach out to the younger generation by making the church experience more entertainment oriented. Pews were removed and spaced out to reduce capacity by a third, the chancel was raised to increase visibility for a 100-person choir, and a lighting system with preprogrammed color-combination settings was installed. A smaller organ was moved onto the stage, which obviated the need for a very tall screen to conceal unsightly organ pipes behind the altar, exposing the stained-glass window beyond.

The extended collaboration proved a positive experience for both client and architect, allowing the congregation to respectfully bring the church into the present day and the designers to continue the work begun so long ago. "Your involvement as an architect is only as good as the vision of your client," says Borkovi. "And here was a client that understood that this building is more than just a church." ■



In 1955, Thermador invented the first built-in oven, forever changing the face of the American kitchen. This year we celebrate the 50th anniversary of this historic milestone with a new collection of ovens offering state-of-the-art features and classic American style. When professional architects and designers want to create a kitchen that makes a bold and dramatic design statement while offering the advanced functionality that today's consumers demand, Thermador is the brand of choice. Thermador, empowering the kitchen enthusiast for more than 70 years.

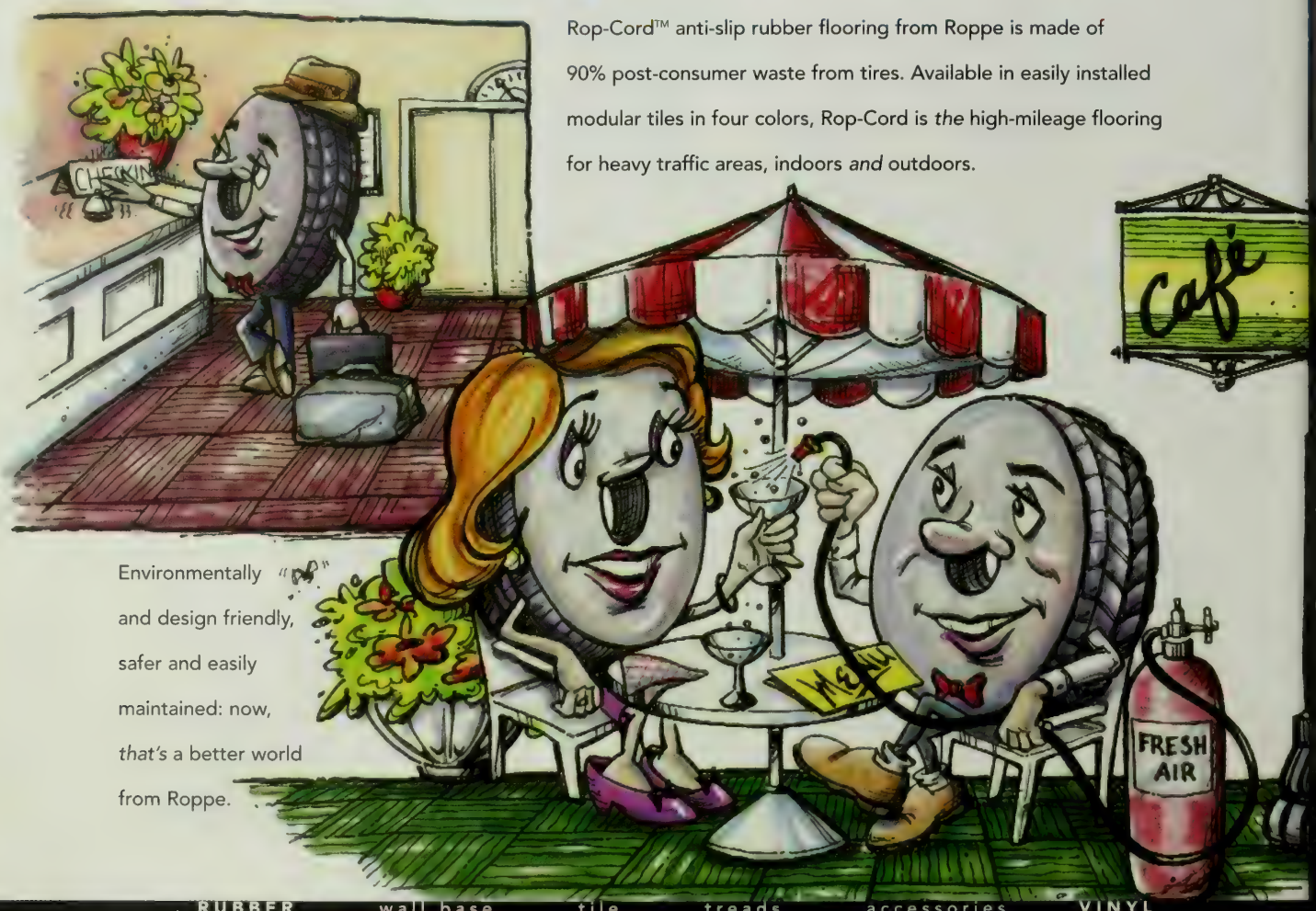
WWW.THERMADOR.COM 1-800-656-9226

Thermador® | *An American Icon*™

CIRCLE 39 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Recycled tires inspire flooring for a better world

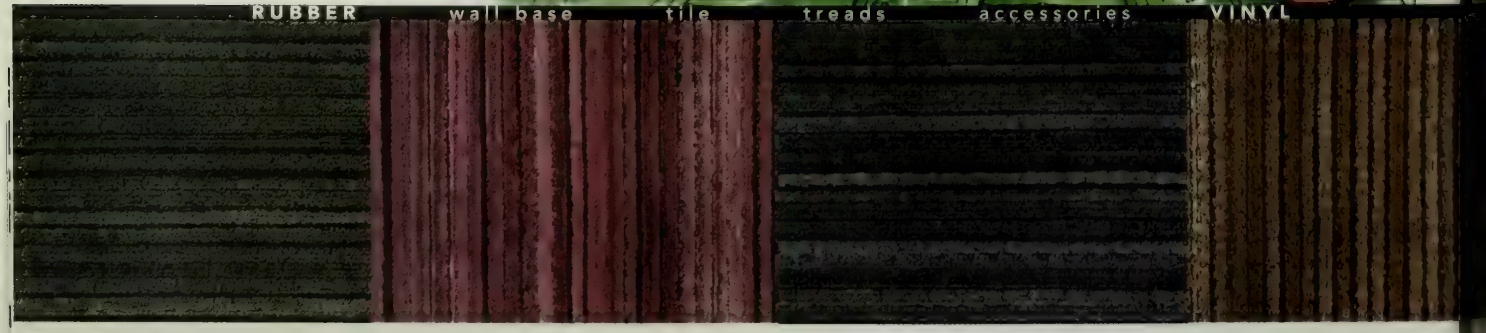
INDOORS OR OUT.



Rop-Cord™ anti-slip rubber flooring from Roppe is made of 90% post-consumer waste from tires. Available in easily installed modular tiles in four colors, Rop-Cord is *the* high-mileage flooring for heavy traffic areas, indoors *and* outdoors.

Environmentally and design friendly, safer and easily maintained: now, *that's* a better world from Roppe.

RUBBER wall base tile treads accessories VINYL



ROPPE.

Proven. Flooring. Experiences.

1-800-537-9527 www.roppe.com

CIRCLE 40 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



lbe Windows & Doors in one word – CUSTOM. Custom-crafted to fit your every need.
r more information visit www.kolbe-kolbe.com or call 715.842.5666.
RCLE 41 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

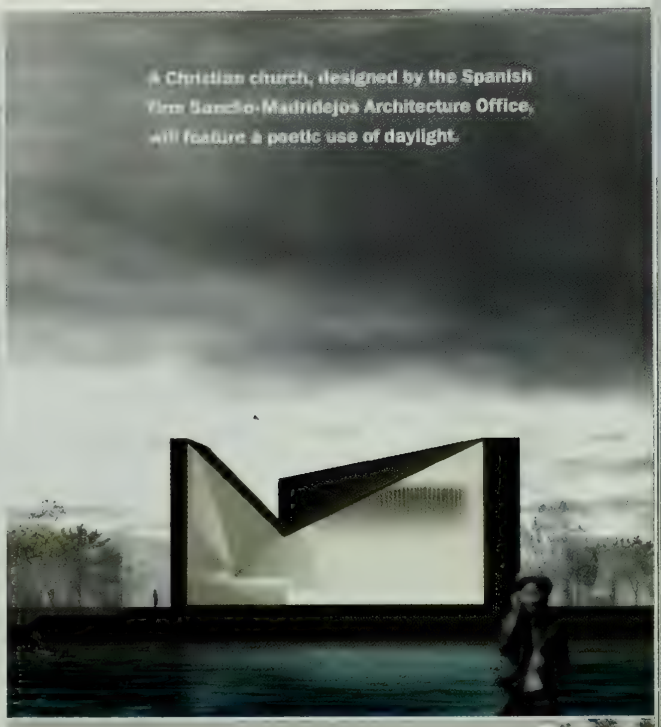
KOLBE
WINDOWS & DOORS
See the Difference Quality Makes

Yichun Liu designed a kindergarten where each classroom has its own courtyard, a traditional Chinese idea used in a modern way.

As construction moves forward on designs by architects from around the world, some parts of Qingpu are caught between periods, suspended between a time of traditional houses and one of modern construction (right).







A Christian church, designed by the Spanish firm Sancho-Madridejos Architecture Office, will feature a poetic use of daylight.



work in Qingpu District. His position is not unlike that of a vice mayor of a large town in America, given Qingpu's population of 250,000. A big challenge was attached to Sun's new job: to develop Qingpu in a sustainable way as its projected population grows to half a million people by 2020. "Qingpu used to be considered an outer suburb," says Sun. "But now it's an important satellite city."

Besides being known for its canals, Qingpu, a 7,298-square-mile district that is shaped like a butterfly, was until recently home to many state-owned factories manufacturing everything from soy sauce to cement. But China's transition to a more market-oriented economy meant that many factories were forced to close. Meanwhile, other parts of Shanghai that relied less on state-owned industries experienced much growth.

Because it has lagged behind other districts in development, Qingpu can learn from the mistakes of past city planning, says Sun: In central Shanghai, "development happened too quickly. They threw away a lot of things by tearing down old buildings with historical value." He adds that planners in the past have not attached much aesthetic value to architecture.

Since the district's population is expected to double, in essence Sun has to create a new city, which the government has named Qingpu Xincheng, or Qingpu New City. About 22 square miles of land has been set aside for factories of multinational companies. Nearly 10.8 million square feet of new residences will be built. Sun also wants to spruce up historic Qingpu's tourist attractions, like Zhujiajiao, an area riddled with waterways and knick-knack shops, by having architects design new hotels and shops.

An important goal amid all the building and revitalization is that the "natural shape of the land is being preserved," says Sun. "We want to keep all the canals intact." The district plans to create a system of water buses on the waterways, like Venice, for locals and tourists alike. Another way that Qingpu's plan differs from that of other towns is that it has managed to attract a number of foreign architects to build schools, government buildings, a church, and other public places. The architects that Sun has hired include Jacques Ferrier of France, Spanish architect



A CONVERSATION WITH JIWEI SUN

Soon after overseeing the completion of Xintiandi, one of Shanghai's most high-profile projects in a ritzy, central part of town, Jiwei Sun shifted his focus to the task of reinventing the less-than-glamorous suburb of Qingpu.

He brought to Qingpu ideas that government officials and architects had learned from building Xintiandi, a project that converted historic dwellings into a modern, mixed-use district. After it was completed, "our expectations were higher," says Sun. The government learned two lessons, Sun says: to preserve history and to choose the right architect for the project. In China's hodgepodge of haphazardly and hastily built cities, these rules are often broken.

Architects and colleagues regard Sun as a progressive, forward-thinking government official—which many agree is remarkable in China. "He doesn't have to look at a project long to know your intent and whether that intent can be carried out," architect Qingyun Ma says of Sun. "Most politicians and leaders don't have the means to care about architecture."

Sun explains that his background as an architect sets him apart from other planning officials, most of whom have little education in architecture or planning. After graduating from Tongji University's architecture school, he worked as an architect for five years before going into the government. "I'm very clear about the problems we have. The government ought to have responsibility in pushing things in a healthy direction."

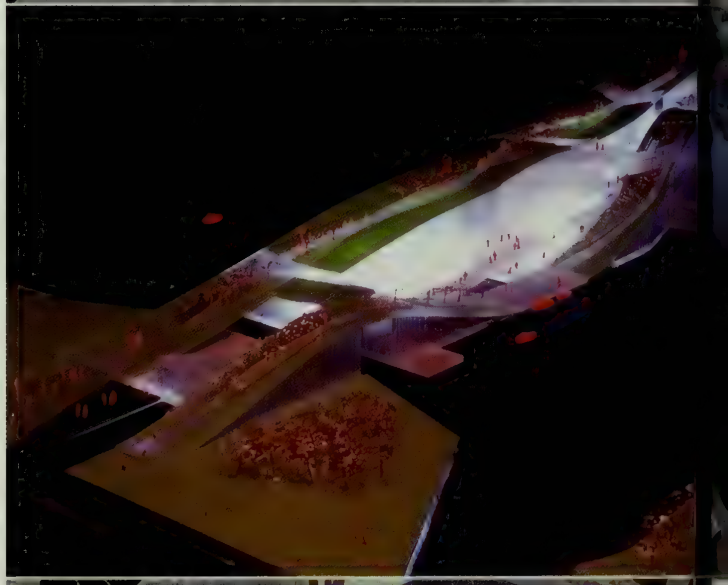
Given that China's days as a completely state-run economy are over, however, Sun believes that private developers and architects must also play a large role in how cities are shaped. "It can't be in the hands of only the government," he says. Unlike other districts that give developers great leeway, Qingpu requires that developers go through a thorough application process to ensure the developer's vision coincides with the city's.

As one of the few voices in the government pushing for careful planning and preservation, Sun says he often finds himself trying to convince others that "city planning and design are very important in deciding how a city is perceived."

To that end, he has set up mandatory classes for government cadres to attend every month at the district's main government building. Promoting it as a social event, Sun has invited national experts such as Tongji professors or seasoned architects to lecture officials on topics including architectural history and preservation.

A staunch supporter of preservation, Sun believes that Chinese cities should follow Europe's lead in how to manage small but densely populated areas. "In Europe, each individual small town has its own characteristics. In China, we can learn from this." *Jen Lin-Liu*









Thumb Island (this page and opposite three), designed by Qingyun Ma's firm MADA, is a community center where landscape and building merge. A green park will occupy the building's rolling roof.

Sancho-Madridejos, and Kunyan Deng from Taiwan.

What makes the activities in Qingpu even more remarkable is that the district does not have any special funds for attracting architects to do public works. (Sun estimates that the district spends $610 million per year on overall development.) Rather, Sun has managed to attract a number of international architects to Qingpu through cultivating relationships and by giving architects free artistic range. Foreign architects are often eager to build in China and can provide alternative approaches to design and planning.

One architect who has taken the lead in developing Qingpu is Qingyun Ma, who heads his own firm in Shanghai called MADA s.p.a.m. A graduate of the University of Pennsylvania's architecture school, Ma found himself plunging headfirst into issues that he had tried to avoid while practicing as an architect in America. "I used to be a pure Modernist," he says. After returning to China three years ago, "I realized that my refusal to do anything historical was wrong. [History] is so pervasive."

Though Ma is younger than many of the Qingpu planning officials he advises, he has managed to earn their respect. That respect has given Ma the freedom to build several projects in Qingpu, including Qiao Zi Wan, or Bending Bridge Bay, which is located on an oval-shaped piece of land surrounded by canals. Currently a run-down abandoned residential area, the site is being cleared to make way for a commercial district with a pedestrian thoroughfare. Located next to a park and temple built in the Qing Dynasty, the challenge has been to "introduce something new in a historic environment," says Ma.

Another project of Ma's is the innovative Thumb Island, a community center that floats on a lake. Free from the responsibility of dealing with history here, Ma has designed a structure composed of two buildings that rise and fall gently like two glass-encased mounds. The roof of the complex, which resembles two rolling hills, will become a public park. Standing atop the half-completed clubhouse, Ma says, "I'd love it if people did tai-chi up here."

Wood + Zapata designed a new residential community (photo, above, rendering, below) that echoes the urban pattern of the old water town (opposite, bottom).



American architect Benjamin Wood, of Wood + Zapata, was attracted to Qingpu because he says he was given "carte blanche" by the Australian developer SPG to create his vision of a residential community—without a gate. Having just completed a high-profile project in central Shanghai called Xintiandi, Wood shifted his focus to Qingpu to build town houses, villas, and apartments with an urban core of several restaurants and an old farmhouse that's been converted into a cultural center. "It's sort of a transformation of the vernacular water town urban typology with clean Modern lines," says Wood.

Indeed, much of the construction involves taking into account what already exists, or the historic surroundings of a project. For his part, Sun wants a former flour factory to be converted into lofts for artists. A state-owned warehouse will be turned into an exhibition center. Sancho-Madridejos, the Spanish firm, has been commissioned to rebuild a Christian church—itself a rarity in China—in a futuristic style with sharp lines. Nearly completed is a public kindergarten by Chinese architect

SAMSUNG



STARON® ENSURES THAT PATIENTS HAVE GOOD COLOR. Trends in health care and other commercial design are moving away from purely functional, sterile-looking materials and favoring those that convey warmth and comfort. Staron offers you a solid surface option in more than 50 colors to help you achieve that impression. And because Staron is nonporous and won't harbor bacteria, viruses or mold, it's approved for use in medical facilities, laboratories, and commercial food preparation areas. To learn more about how Staron can give your project a healthy glow, visit **www.getstaron.com/design3** or call **1.800.795.7177 ext. 350.**

COUNTERTOP | **SANDED SAHARA**

© 2005 Chemi Industries Inc. Staron has been certified by NSF International under its NSF51 rating for food zones.

staron

CIRCLE 42 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

A large school by the French architect Jacques Ferrier features courtyards and even some wind turbines to generate power.



Yichun Liu that features 15 blocky classrooms, each with a courtyard, a traditional Chinese feature of homes, but done in a nontraditional way.

While developers usually can push their vision through when building in other places in China, those who build in Qingpu are put through a rigid test, says Fanny Ma, the deputy general manager of Hongda Group, a Chinese developer that is building a project in the tourist area of Zhujiajiao. "The government's needs reflect our needs," she says. "It might be more frustrating in the beginning of the process, but afterward, our project has zipped along like a high-speed train."

With many projects still in the incubation stage, however, it is yet to be seen what Qingpu will become. Though roads have been paved and schools have been built, Qingpu New City has the feel of an empty shell, since few buildings have been fully completed. Ma, the architect, counters that the biggest change so far in Qingpu is not a physical one: "It's a psychological change. Designers and architects are having to really think to get a job here. The threshold has been raised." ■



Benjamin Moore® Paints

Color. Imagined.

Big Country Blue #2066-30

1-866-708-9181 or visit benjaminmoore.com

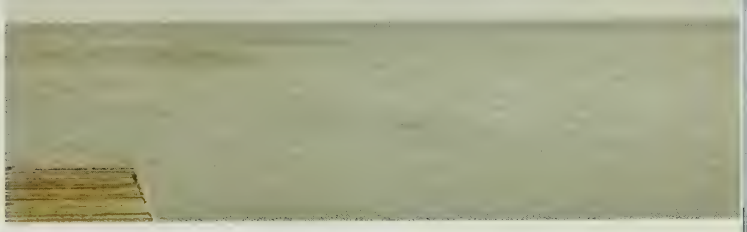
©2005 Benjamin Moore & Co. Benjamin Moore is a registered trademark, and the triangle "M" symbol is a trademark, licensed to Benjamin Moore & Co.

CIRCLE 43 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

After Theory

Debate in architectural schools rages about the value of theory and its effect on innovation in design





By Michael Speaks

Over the past several years, some of our most prestigious schools and institutes of architecture have drawn up balance sheets in an effort to document where the discipline has been and to propose where it should be going. Despite their obvious concern, most schools have nonetheless been slow to recognize the fundamental nature of the challenges confronting architecture in a world increasingly dominated by technological change and marketization. Although they have done an adequate job teaching new digital techniques of design and analysis, schools have largely failed to develop an intellectual culture that would enable students to make the best use of these skills in a marketplace that puts such a high value on innovation.

One reason may be that since the 1970s, many of the so-called elite schools have embraced a form of vanguardism shrouded in Deconstruction and Marxism. They share an almost constitutional aversion to commerce and the marketplace, the very milieu of innovation and shaper of any future architecture, whether you are in Boston, Beijing, or Buenos Aires. The grip that these theories have on the intellectual culture of schools is so strong that until very recently it inhibited the development of alternative forms of thinking. Many critics, however, now recognize that these resolutely negative vanguard theories have been made irrelevant by the rapidly modernizing and flattened world that has begun to take shape over the past decade. Few, however, have recognized that we don't just need a new "theory," but instead we need a new intellectual framework that supports rather than inhibits innovation.



George Baird, dean, Faculty of Architecture, Landscape, and Design, University of Toronto.

Nonetheless, there are signs inside the schools themselves that the grip of such theories is beginning to loosen and that alternatives to them are emerging. George Baird, dean of the Faculty of Architecture, Landscape, and Design at the University of Toronto, published an essay in the *Harvard Design Magazine* (fall 2004/winter 2005) that summarizes recent debates between two generations of critics and teachers who hold very different views on the relevance of Deconstruction, Marxism, and theory in general to architectural education and contemporary practice. Baird focuses on an attack mounted by a younger generation, including Stan Allen, Sylvia Lavin, Robert Somol, Sarah Whiting, and me, on the "critical" architecture that has been promoted and defended for more than 25 years in architecture schools by the architect Peter Eisenman and Harvard professor of architectural theory Michael Hays. Eisenman's writings, like the claims of theorist Jacques Derrida, the father of Deconstruction, contend that there is no ultimate truth, but only incomplete, critical engagements with historically determined versions of truth. For Eisenman, critical, or "dislocative," architecture, as he once called it, critiques these normative versions of architectural truth in a seemingly endless search for a real but ultimately unattainable essence of architecture. And this essence, for Eisenman, can only be expressed in the abstract perfection of forms shielded from the market-driven demands of program, use, and commercial viability.



Sylvia Lavin, chair of Architecture and Urban Design at UCLA.

Hays, on the other hand, has established himself as one of our most influential theorists by extending and expanding Marxist historian Manfredo Tafuri's claim that all architecture is unredeemably corrupted by capitalism. Architects are thus obliged to either create work that resists capitalism or attempt to bring about an end to capitalism so that a new, utopian architecture can emerge. Eisenman and Hays have established—through the journals they respectively founded and edited, *Oppositions* (1973–84) and *Assemblage* (1986–2000), through the many books they have published, and through long, distinguished teaching careers—the intellectual foundation for architecture that resists, negates, and attempts to create alternatives to establishment or market-corrupted design and commercial culture in general.

The above-mentioned younger critics, or "post-critics," as Baird sees them, have rejected "criticality" in favor of an engagement with the very same conditions that Eisenman and Hays seek to resist. Sylvia Lavin's support for a "cool" architecture that is unapologetically fashionable, desirable, and ephemeral; Robert Somol and Sarah Whiting's call for "projective" architecture practices that, as they say, engage market forces without capitulating to them; and Stan Allen's

Michael Speaks, a contributing editor at RECORD, is former director of the graduate program at SCI-ARC, and has a Ph.D. in literature from Duke.



Robert Somol, assistant professor of architecture at UCLA.

assertion that "architectural practice does not comment on the world, it operates in and on the world," certainly confirm this. Baird cites my own work, including a series of essays published in this magazine [RECORD, December 2002, page 74, and January 2002, page 72] as the most polemical and market-friendly of these critiques, and as having initiated the first frontal attack on criticality.

In addition, it is worth pointing out that Baird's "post-critics" have distanced themselves from, and in some cases have rejected, architecture theory altogether. Lavin, in an essay published almost 15 years ago in *Progressive Architecture* (August 1990), and more recently Allen, in several roundtable discussions, have expressed considerable doubt about the impact of theory on design practice. While not dismissive of theory, Allen—who has admitted on many occasions that it played a very important role in his own intellectual development, and indeed in the development of the intellectual life of architecture inside and outside of the academy—feels theory's importance is now a historical rather than a contemporary matter. As such, it has little or nothing to contribute to practice.

Breaking, perhaps, with Baird's other "post-critics" (a designation, in any case, I do not acknowledge), I would argue that theory is not just irrelevant but was and continues to be an impediment to the development of a culture of innovation in architecture. Posing as a youthful alternative to Enlightenment certainty, theory was instead old-fashioned enlightened critique turned on itself—unremitting critique chasing its own tail, without purpose or end. Theory also perpetuated the Enlightenment belief that thinking is separate from and in fact guides doing; that manifestos guide political action; that architecture theory guides architecture practice.



Jeffrey Kipnis, professor of architecture at Ohio State's School of Architecture.

Action is thus dependent on the discovery or declaration of a set of guiding truths or principles, even if, as was the case with theory, the truth is that there is no truth. This was certainly the case with the famous *Deconstructivist Architecture* exhibition held at the Museum of Modern Art in New York in 1988. Like the "truths" discovered by early-20th-century architecture vanguards and written down in their manifestos, theory offered Mark Wigley and Philip Johnson, the show's curators, a new truth masking as nontruth. Published in an accompanying catalog, Wigley's brilliant manifesto bound together the vanguard theory of Jacques Derrida and the vanguard architectural forms of Russian Constructivism.



Michael Hays, professor of architectural theory at Harvard's Graduate School of Design.

Such was the role theory played in architecture beginning with the first issue of *Oppositions* and ending with the final issue of *Assemblage*: to provide the architecture vanguard a left-political intellectual agenda that would enable it to resist, criticize, and propose utopian alternatives to capitalism and the market. That fantasy has finally lost its allure and all connection to the real world. The architecture community is now left to face the future without guidance from the all-knowing theory vanguards that dominated schools since the 1970s.

More perhaps than anything else, the certainty of theory vanguardism has retarded the development of a culture of innovation in schools of architecture, which requires a more fluid, interactive relationship between thinking and doing, as well as an expanded definition of what counts for architectural knowledge. Suggesting one way this might be accomplished, Jeffrey Kipnis, one of the most important theorists of Deconstruction in architecture and a participant in "How to Become a Star," a cheeky public discussion on architectural education hosted by Wolf Prix at the Academy of Applied Arts in Vienna last spring, proposed that schools focus on teaching architectural expertise, which he carefully distinguished from mere technique. Only those who have mastered the basic competencies of the discipline can innovate, Kipnis con-

tends, because only such experts know how to use technique to exceed the boundaries and limitations defined by that discipline. Kipnis may very well be right, but just what that expertise consists of and how it will be taught is still an open question, perhaps the most important question facing schools today.

In the meantime, it is not surprising that the most promising answers to the question regarding the future direction of architecture are not being formulated in the studios and seminars in our best schools, where all manner of digital design and fabrication techniques are being taught, and where new species of form are born (at least on the screen) every day, but in the workshops and on the desktops of small offices—in the test labs, that is, where new forms of architectural practice are being forged.

William Menking, in a recent essay in *The Architect's Newspaper* (January 25, 2005), for example, noted the growing importance of the workshop to several New York area architecture and design offices, including Sharples Holden Pasquerelli (ShoP), Freecell, and FACE in New York City; William Massie in Troy, New York; and Veyko in Philadelphia. "What makes today's workshops unique is that they can quickly fabricate models directly from laser-milling machines to build one-to-one full-scale models," he wrote. This allows them, as Sean Tracy of FACE told Menking, "to quickly see the limitations of a design and the complexities of its construction."

This kind of speculative testing and prototyping is an example of what Michael Schrage, codirector of MIT Media Lab's E-market Initiative, calls a "spreadsheet way of knowledge." This is a form of thinking-as-doing that creates design knowledge, or "design intelligence," as I have called it in this and other magazines, through design prototyping. Recounting the introduction in 1979 of the first personal digital spreadsheet, "VisiCalc," which made it possible for a single accountant or manager to model and manipulate a "phantom business" inside their personal computer, Schrage proposes that spreadsheet thinking introduces the possibility to project plausible business futures or design prototypes that can be tested, redesigned, and retested quickly, cheaply, and under conditions that closely approximate reality. Such prototyping is inherently innovative because it allows the designer to make and test numerous "phantom" designs, speculating—thinking, that is, by doing—on a range of plausible designs, which, in the absence of such speculation, might seem implausible. Moreover, it allows the designer the ability not only to offer the client alternative solutions to design problems, but it also permits the designer to reframe and present alternative design problems that the client had no way of formulating. Of course, this has always been the case, but with CNC (Computer Numerical Control) milling, digital fabrication, and parametric modeling, speculation happens in real time with real material.



Stan Allen, principal of Field Operations and dean of the School of Architecture at Princeton.



Peter Eisenman, a New York architect, teaches at Yale, Princeton, and Cooper Union.

Significantly, prototyping also creates a shared design space that enhances collaboration and thus the introduction of variables that might not otherwise have been considered, leading to further innovation. Alejandro Zaera-Polo of Foreign Office Architects describes this process well when he says regarding the way his team worked on the Yokohama Port Terminal [RECORD, November 2002, page 142], "The design process became in itself a process of creating knowledge." Schrage believes that this is one of the most exciting features of new, digitally driven forms of prototyping, where the prototype, which can be analyzed, tweaked, and adjusted, becomes a tool of innovation and not just a version of the final design. Making becomes knowledge or intelligence creation. In this way, thinking and doing, design and fabrication, and prototype and final design become blurred, interactive, and part of nonlinear means of innovation. Schools would do well to learn the lessons being taught in the small, unassuming workshops of their younger faculty and their friends; and quickly, before another vanguard offers its very tempting services, and we are all treated again to a new version of a new truth that will lead us down another path. It has happened before. ■

THEORY IS NOT JUST IRRELEVANT BUT CONTINUES TO BE AN IMPEDIMENT TO INNOVATION.

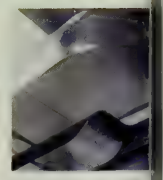


THE KNAUF KOOLDUCT® SYSTEM SIMPLIFIES EVEN THE MOST DIFFICULT DUCTWORK CHALLENGES.

Introducing the Knauf KoolDuct system – the phenolic foam-based, pre-insulated duct system that provides an energy-efficient, space-saving, total low-cost solution for the commercial and industrial markets. The KoolDuct system provides superior thermal performance with airtight efficiency, exceeding SMACNA (Class 6) air leakage requirements. Its sealed, aluminum-faced airstream surface is ideally suited for high specification applications. And the Knauf KoolDuct system's lightweight design helps cut installation time in half.

Stay on time and on budget with Knauf KoolDuct, a proven system that has performed in high-profile projects worldwide. For more information contact Knauf at 1-800-825-4434 ext. 8283 or visit our Web site at www.KnaufUSA.com.





KNAUF

"This is my insulation."®

© 2005 Knauf Insulation GmbH.

CIRCLE 44 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

WAUSAU WINDOW AND WALL SYSTEMS

ADVANTAGE BY WAUSAU PRE-ENGINEERED WINDOWS

RULES BOUNDARIES CONVENTIONS

SEE THROUGH IT ALL

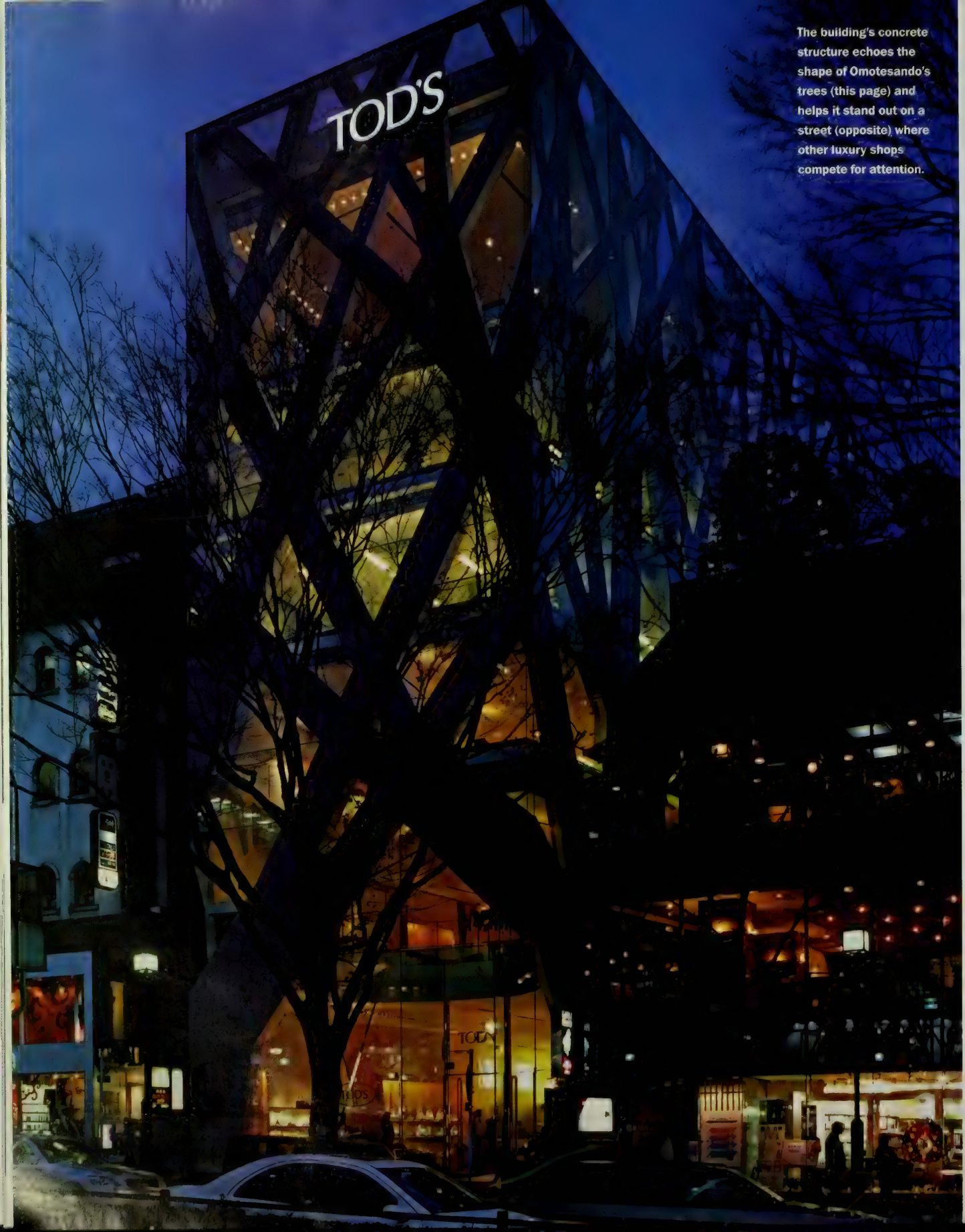


WAUSAU WINDOW AND WALL SYSTEMS

1 877 678 2983
WAUSAUWINDOW.COM

Right
THE WAY YOU WANT IT

CIRCLE 45 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The building's concrete structure echoes the shape of Omotesando's trees (this page) and helps it stand out on a street (opposite) where other luxury shops compete for attention.

Toyo **Ito** fuses structure and wrapper in a network of concrete trees at the new **TOD'S OMOTESANDO BUILDING** in Tokyo

By Naomi R. Pollock, AIA



Toyo Ito's Tod's Omotesando Building feels like a good pair of shoes: fashionable, functional, made of quality materials, and a perfect fit. A slender, L-shaped building for the Italian footwear retailer, it contains offices and a boutique fronting Omotesando, Tokyo's famous four-lane, tree-lined boulevard that in recent years has become the city's showplace for luxury brands and top architects alike. Wrapped by a dramatic enclosure composed of sharply angled concrete elements and polygonal glass plates, Ito's 27,448-square-foot building boldly stands up to the competition.

Because the site, which is shoehorned between a cosmetics shop and a piano showroom, has only 33 feet of prime street frontage, Ito could not rely exclusively on the facade to create an identity for his client's Tokyo headquarters. Instead, he had to find a way to utilize the entire volume in order to distinguish Tod's from the plethora of glass-curtain-wall commercial projects nearby. He saw concrete as the answer, since it could make a strong visual statement on the outside and provide column-free space inside.

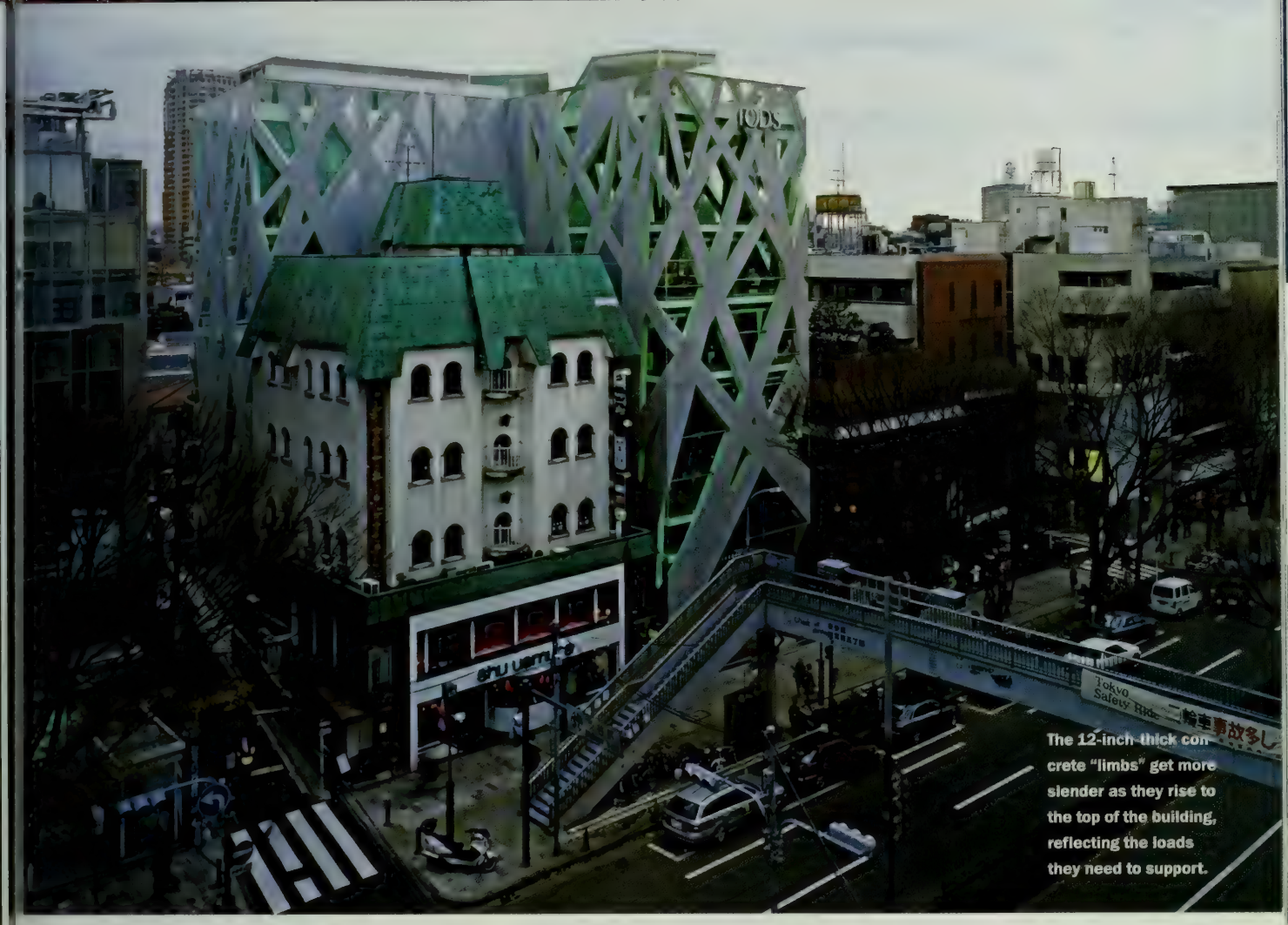
Comprising nine overlapping tree silhouettes, the building's six, 12-inch-thick exterior walls are load-bearing elements and surface treatment all in one. "Trees are organisms that stand by themselves, so their shape has an inherent, structural rationality," explains Ito. Like the deciduous zelkovas, the elmlike shade trees that line Omotesando, hefty trunks of concrete take root below grade at the Tod's building, where they direct their loads down to the foundations. As they climb, the masonry branches repeatedly bifurcate and become thinner, until they are cut off after seven stories. "We did not use any special algorithm to determine their size, but we tried to keep the elements from getting too small," explains Ito, who worked with structural engineer Masato Araya and his firm, Structural

Naomi R. Pollock, AIA, is RECORD*'s special international correspondent in Tokyo and the author of* Modern Japanese House, *to be published this autumn.*

Project: *Tod's Omotesando, Tokyo, Japan*
Owner: *Holpaf B.V.*
Architect: *Toyo Ito & Associates, Architects—Toyo Ito, Takeo Higashi, Akihisa Hirata, Kaori Shikichi, Leo Yokota, Takuji Aoshima, Yasuaki Mizunuma, design team*
Engineers: *Structural Design Office OAK (structural); ES Associates (mechanical)*
Lighting designer: *Light Design*
General contractor: *Takenaka Corporation*



The building's concrete trees define 270 openings, mostly frameless glass plates, but also a few aluminum panels for privacy.



The 12-inch-thick concrete "limbs" get more slender as they rise to the top of the building, reflecting the loads they need to support.

Design Office OAK. Even so, it still took soft concrete with a high slump factor and two layers of wooden formwork to realize all the precise and uniquely shaped pieces.

Between the concrete limbs, Ito placed 270 openings—each one different. Most hold flush-mounted, frameless glass plates. But where nearby buildings were a concern, or the composition warranted it, Ito inserted aluminum panels. Though the panes become smaller and more numerous closer to the roof, the overall balance between glass and concrete remains fairly consistent from top to bottom. Instead of openings cut into a solid concrete volume, transparency and opacity are on an equal footing.

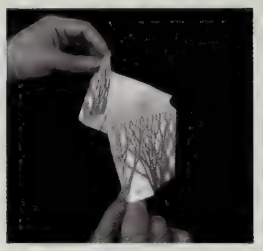
The sizes and shapes of the glass panels correspond neatly to the building's inner workings: the three-story shop, two floors of offices above that, an event space on the sixth floor, and a private meeting room and roof garden on top of it all. The largest opening is, understandably, the shop's display window. From the street, it reads as a two-dimensional sheet of glass divided by a concave space for the store's entrance. Intended to compensate for the boutique's limited street exposure, the opening is actually a crystalline box embedded in the building's facade. Triple height and unusually deep, it showcases an array of brightly colored shoes and handbags, not just to passersby but to shoppers inside as well.

Because the exterior walls and 20-inch-deep floor slabs carry all the structural loads, interior partitions and displays can be placed almost anywhere in the store. To maximize shoppers' contact with merchandise, Ito located stairs of sculptural glass, steel, and travertine either at the front or back of the retail areas. But to reach them, customers must circumvent Ito's freestanding, cellular display cases for accessories, skirt around maroon pony-hide benches designed by Zaha Hadid, and walk past the store's current collection arranged artfully on wall-mounted shelves. Wrapped with angled panels of bird's-eye maple, mirrored glass, and a caramel-colored Vachetta leather that Tod's frequently uses for purses, the shop interior is lush and luxurious but a bit slick and commercial; somehow Ito's calm Minimalism was left at the door.

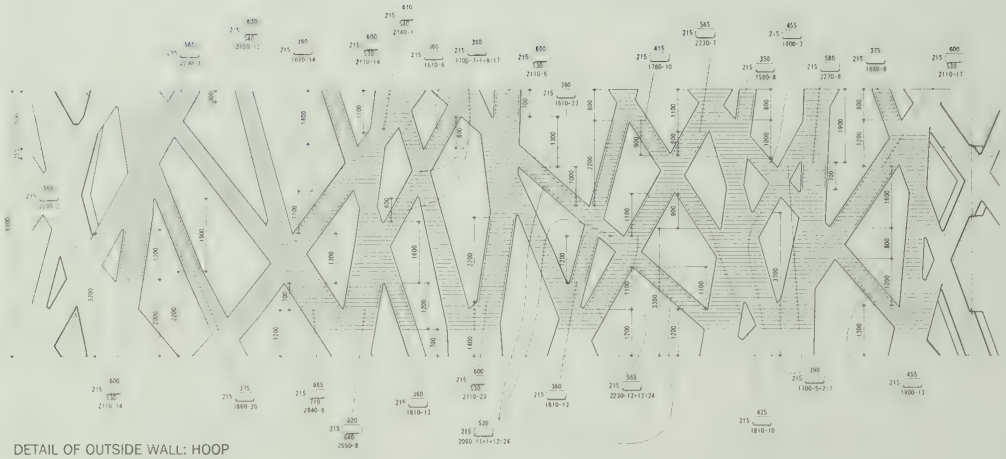
Taking advantage of the site's half-floor-high slope, a second entrance leads directly from the narrow street bounding the site's south side to the building's administrative component above the shop. In addition to work space for the company's 70 employees on the third and fourth floors, this portion of the building features showrooms (on the fifth floor) for introducing new products to the press. One floor up, an 18-foot-high events room runs the full length of the building. Ringed by sweeping city views visible between the forest of intersecting concrete piers, the room can host fashion shows or elegant dinner parties.

Made of thick slabs of walnut wood, the party-room floor is refreshingly rough and unrefined but exemplifies Tod's commitment to use only the highest quality materials for its architecture as well as its shoes. This parallel is even more apparent in the private meeting and dining rooms, where the palette of materials includes travertine floors,









DETAIL OF OUTSIDE WALL: HOOP

In earlier projects, such as the temporary Serpentine Gallery in London, Ito had experimented with folded panels. With the Tod's building, the architect has combined a folded structural system with expressive concrete forms (photos, above, and drawing, left). The perimeter structural system provides column-free space on all floors (plans, below).

1. *Shop*
2. *Machine*
3. *Stock*
4. *Office entrance*
5. *Office*
6. *Lunch*
7. *Meeting*
8. *Showroom*
9. *Party*
10. *Dining*



BASEMENT



FIRST FLOOR



SECOND FLOOR



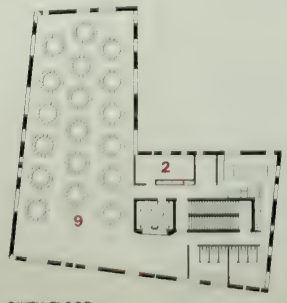
THIRD FLOOR



FOURTH FLOOR



FIFTH FLOOR



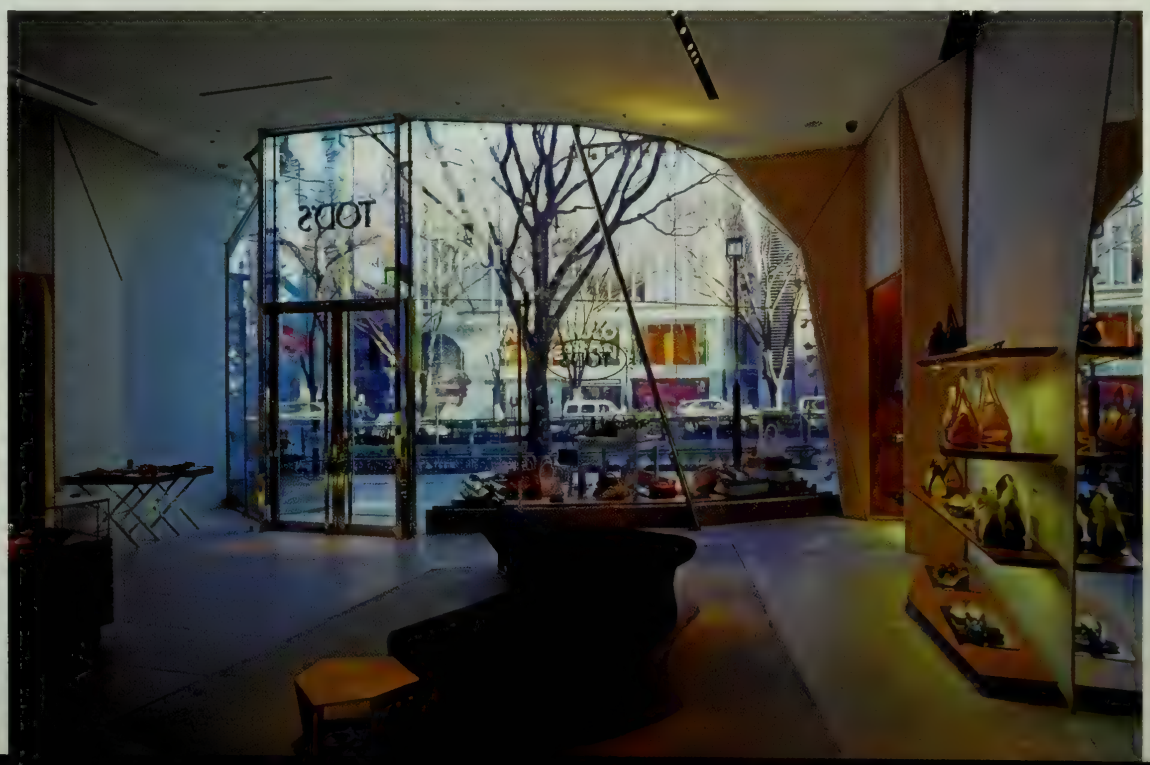
SIXTH FLOOR



SEVENTH FLOOR



Ito brought the building's folded geometry inside the retail spaces, creating a dynamic relationship between displays and circulation (above). The main entry off Omotesando (right) includes a pony-hide bench designed by Zaha Hadid.

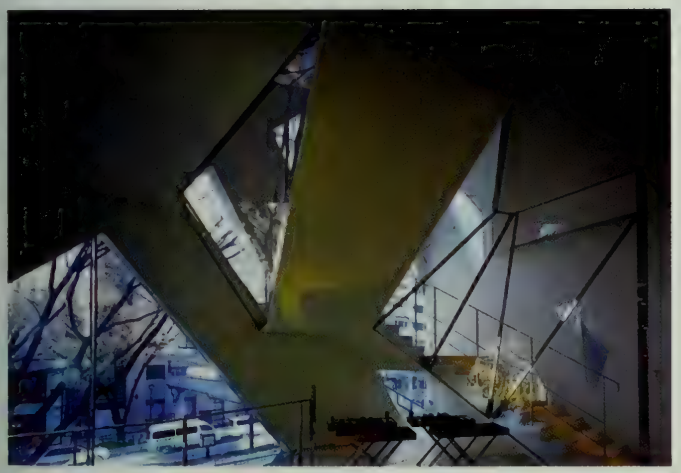




Stairways are important elements in a carefully orchestrated procession of spaces and experiences through the building.

A glass-enclosed meeting room (below and right) and a private dining room sit on the roof, surrounded by a grass-and-travertine garden. Small lounges and sitting areas (bottom two) offer shoppers places to try on shoes and enjoy the views.









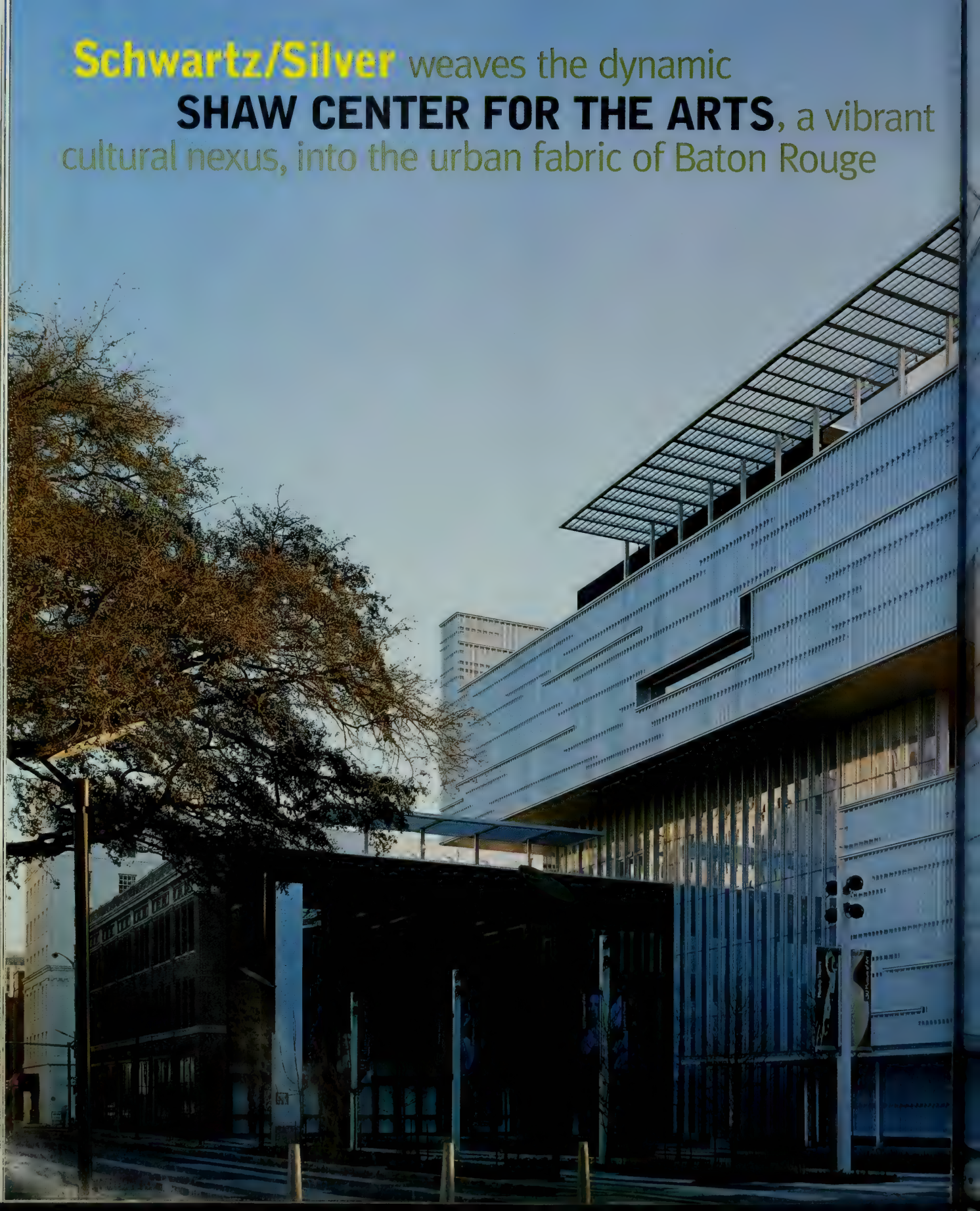
antique stucco walls, and cowhide surfaces. Encased in irregular glass walls like giant display vitrines, the two rooms showcase leather-covered tables, walls, and doors—each one carefully stitched with contrasting white thread by one of 10 craftsmen imported from Italy. A terrace with grass patches, travertine paving, and elements of traditional Japanese gardens is the perfect stage for the two objectlike rooms.

The Tod's Omotesando Building is emblematic of the structural innovation we have come to expect from Toyo Ito, who masterminded such breakthrough buildings as Sendai's Mediateque and London's Serpentine Gallery Pavilion. Its clean, concrete exterior devoid of excess impresses us with its timelessness. Like a classic pair of loafers, it is bound to develop more character and patina as it ages. ■

Sources

Travertine rooftop pavers: *Yabashi Marble Company*
Curtain-wall glazing: *Asahi Glass Building*
Carpet tiles: *Hasetora Spinning Co.*
Wax-finished walnut flooring: *Bozo Company*
Wood showcases and niches: *Modar*
Display fixtures and showcases: *Custom by Toyo Ito & Associates*

For more information on this project, go to Projects at **www.architecturalrecord.com**.


Schwartz/Silver weaves the dynamic
SHAW CENTER FOR THE ARTS, a vibrant
cultural nexus, into the urban fabric of Baton Rouge



The 125,000-square-foot, 100-foot-tall center, with its rain screen of channel glass over corrugated aluminum (for technical details, see page 153), can be seen from virtually anywhere in the city.



The LSU Art Museum appears to float above other components of the complex: a former parking garage housing offices, classrooms, and galleries; a glass enclosed lobby; and a theater.

By Sam Lubell

Looking at Baton Rouge, Louisiana, from the rooftop of a local office building, one can understand why the city has long been overshadowed by its leafy suburbs, and by New Orleans, about 80 miles to the southeast. Dominating the view are boarded-up buildings, empty parking garages, and few signs of life. But looking west toward the old state capitol and the Mississippi River, one image emphatically counters this perception: the new Shaw Center for the Arts, designed by Boston-based Schwartz/Silver Architects with New Orleans–based Eskew+Dumez+Ripple.

The $35.7 million center, finished this March, is a vital component, and symbol, of a nearly $1 billion state and private investment in Baton Rouge (including museums, government buildings, condos, and restaurants) dedicated to restoring downtown's clout and popularity. Bridging the divide between a splashy "destination" arts building, stubbornly independent of its urban environment, and a discreetly contextual arts complex that fades into its surroundings, the center is a hybrid. It's still splashy—announcing downtown's modern reemergence with its gigantic, dynamic design. But it also meshes with the city, meandering through the urban fabric and luring investment through its abundant combination of cultural facilities. Sponsored by the state, the city, the Baton Rouge Area Foundation, and Louisiana State University, the complex contains LSU's Museum of Art, the 325-seat Manship Theater, two smaller rehearsal and performance spaces (contained in a separate wing), two restaurants, and—in an adjoining 1920s Art Deco parking garage called the Auto Hotel—small galleries, classrooms, and offices for local arts organizations.

Standing on the center's sixth-floor rooftop terrace on a breezy spring evening, it's easy to see why many locals consider it *the* place to be in town. The area's well-dressed sophisticates are out in droves, feasting on cajun-style sushi, and enjoying sweeping views of the river. The plan of the 125,000-square-foot, 100-foot-tall complex is predicated first on literally elevating the arts. The museum component—a lofty, free-flowing, 17,000-square-foot space containing painting and sculpture that reflects Louisiana's rich art tradition, as well as objects from across the globe—cantilevers over the Auto Hotel and spans via structural steel over a large, glass-curtain-wall-enclosed lobby and the warm, acacia-dominated theater. Because of space constraints on lower levels, placing the museum on the fifth floor was the only way to ensure an uninterrupted sequence of galleries. The building's height also maximizes views of the river, a new phenomenon in a city where

Project: *Shaw Center for the Arts, Baton Rouge, Louisiana*
Design architect: *Schwartz/Silver Architects—Warren Schwartz, FAIA, principal; Christopher Ingersoll, AIA, project manager; Philip Chen, AIA, project architect; Richard Lee, designer*
Executive architect: *Eskew+Dumez+Ripple*
Structural engineer: *McKee & Deville*

At night, the center's channel-glass facade glows like a lantern (top) above the renovated, 1920s former garage it adjoins. Rooftop terraces, containing rock and sculpture gardens, provide expansive river views (bottom).

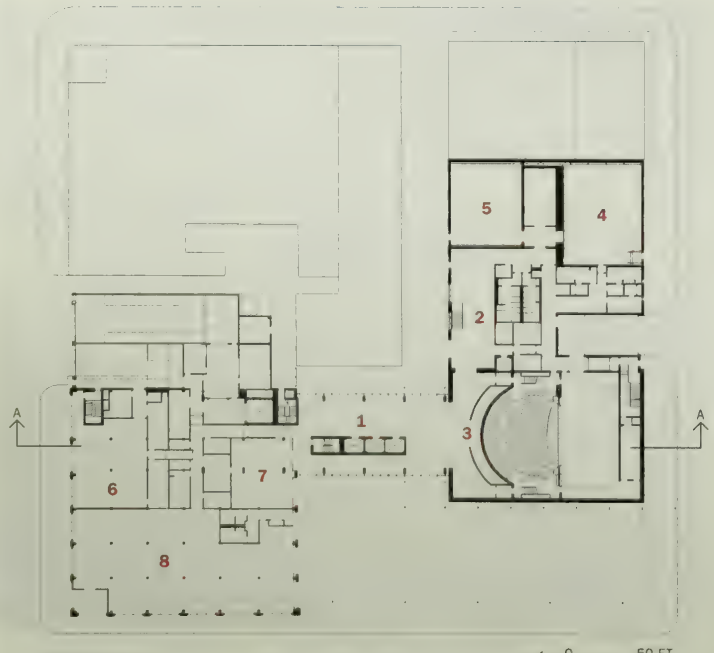
industry, not cultural attractions, have long littered the Mississippi's shores. From many vantage points, the center seems to hover above its setting: small wonder it's commonly called the "flying saucer." Another popular nickname is the "stapler," derived from the building's bended shape, created first by a museum skylight to the north that reaches above the building's roofline, and last by a large void to the south that separates the museum from the theater. This shape breaks the center's monumentality (exaggerated by the windowless theater and museum) and helps lend the structure a meandering quality evocative of the river's contours.

In order to enhance the connection with the river, and lend further intricacy to the building's monolithic form, the architects developed a glass skin for much of the complex that resembles the river's shimmering, rippled surface and colors (page 153). Acting as a rain screen in a climate known for heavy downpours and the occasional hurricane, the structure is composed of various-size greenish channel glass fitted over corrugated aluminum. It glistens in the sun and glows magnificently at night. The glass is further broken up (and braced) by randomly placed, different-size metal bands and channels that help create depth and suggest a lively outdoor artwork.

The stunningly Modern exterior has been a shock to many in this practical town ("Look at all that wasted space," says the superintendent of a nearby building), but many appear to have embraced the center as a fascinating, alluring addition, and a clear sign of the city's progress. "People were



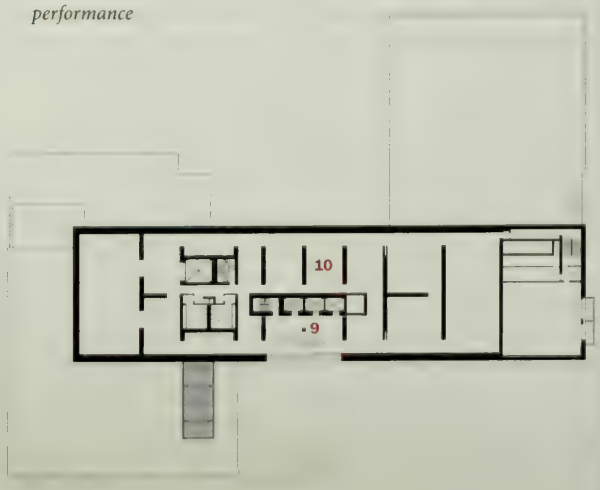
Polished concrete floors, exposed concrete columns, and aluminum elevator coverings create a gritty, yet refined aesthetic.



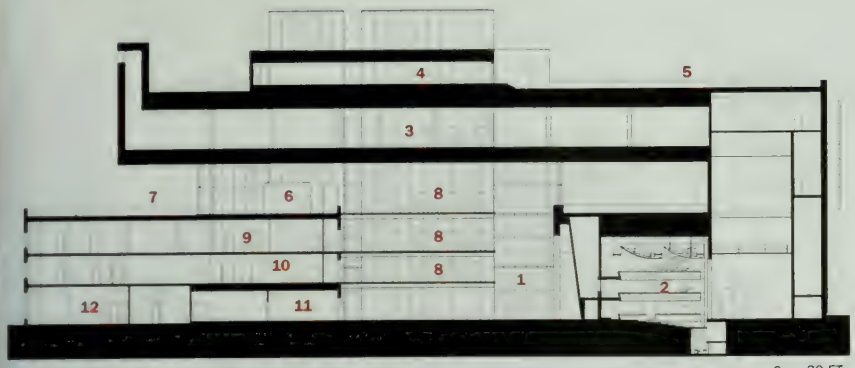
GROUND FLOOR

N← 0 50 FT. 15 M.

1. *Public lobby*
2. *Theater lobby*
3. *Manship Theater*
4. *Rehearsal/theater*
5. *Dance rehearsal/ performance*
6. *Gallery (LSU School of Art)*
7. *Museum store*
8. *Restaurant*
9. *Museum lobby*
10. *LSU Museum galleries*



FIFTH FLOOR



SECTION A-A

0 30 FT.
9 M.

1. *Public lobby*
2. *Manship Theater*
3. *LSU Museum galleries*
4. *Restaurant*
5. *Public terrace*
6. *Sculpture garden lobby*
7. *Sculpture garden*
8. *Elevator bridge*
9. *Curatorial*
10. *Classrooms/offices*
11. *Museum store*
12. *Gallery (LSU School of Art)*

Free-flowing galleries in the LSU Museum of Art (below left) display art from the southern U.S., France, and England, as well as Native American and other cultures. The Manship Theater's warm acacia wood (below) creates an intimate atmosphere.





not content to stay stuck in the mud," says Schwartz/Silver principal Warren Schwartz, FAIA, whose firm was originally chosen through a Request for Proposals to design the LSU Museum in a faraway suburban location. Sensing a tidal shift, state and university officials decided instead to merge the project with a theater and arts incubator project under way downtown.

Inside, the center's spare, 65-foot-tall, 6,450-square-foot lobby heightens drama through its skyward thrust and flood of natural light, while visually connecting the center's many components. The architects, limited to a tight budget, kept things simple. Schwartz describes the aesthetic, which includes polished concrete floors, exposed-concrete support columns (encasing structural steel), and perforated-aluminum elevator and stairway coverings, not as "industrial" (a no-no in a town where grittiness is everywhere), but "more like a place where you make art than one where you see it."

Outside, the Shaw embraces the jumble of urban life, abutting existing restaurants and shops, which Schwartz says he urged local officials to keep. To the east, a narrow, building-lined open space extending from the center's lobby forms the "third street alley," where the Shaw's rehearsal/performance spaces are distinguished by their dark-gray stucco facades. To the west, a plaza, designed by Hargreaves Associates, incorporates fountains, a huge old water tower, and existing live oak trees. Its alternately light and dark paving echoes the turbulent overlap of forms on the complex's facade.

The rich combination of spaces inside and out is ultimately successful, although not without flaws. The center's greatest strength, its attention-getting size and shape, could also have been its worst enemy, but efforts to break up the massing and clearly articulate spatial connections are effective. Incorporation of the local environment makes the complex much better than a mere sculptural statement. Yet from some angles the huge building still appears awkward in its context. On foggy days, the exterior surface's luminosity gets murky, and the greenish tint can give it an office-building quality. And in the lobby, the spartan atmosphere, while commodious, needs to be complemented by more effective visual anchors. Yet these shortcomings are overshadowed by the building's most important feature: its ability to make everything around it better. Elizabeth "Boo" Thomas, executive director of local group Plan Baton Rouge, explains, "Once you experience this building, you start to notice all the other great things going on in town." ■

Sources

Metal/glass curtain wall: *BHN Corporation*
Glass: *Viracon*
Pavers: *Hanover Pavers*
Concrete: *Heck Industries*
Built-up roofing: *Vaughan Roofing & Sheet Metal*
Aluminum: *EFCO*
Structural steel: *Steel Fabricators of Monroe*
Glass: *Viracon*

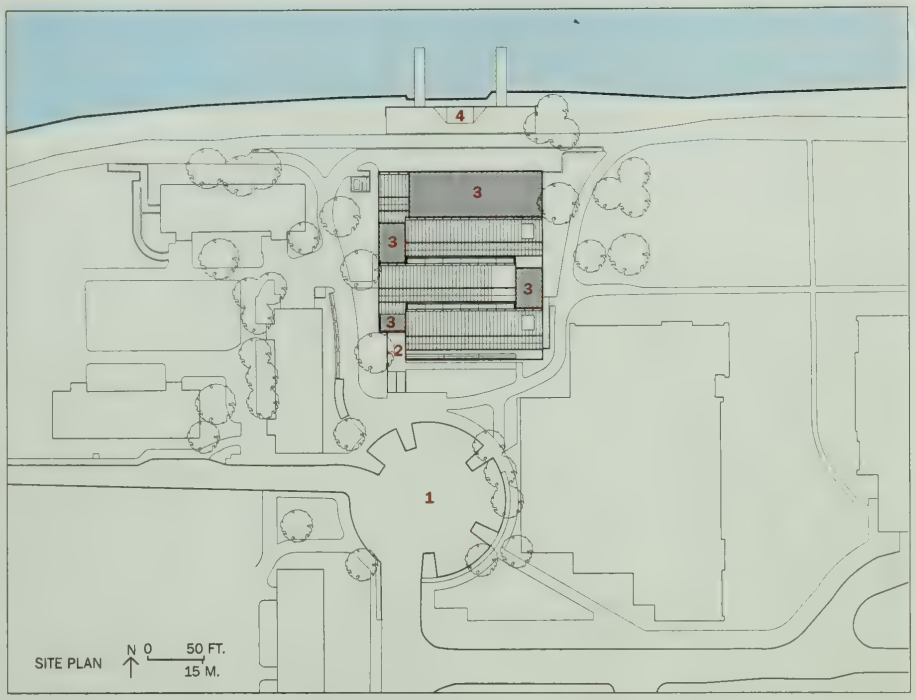
For more information on this project, go to Projects at **www.architecturalrecord.com**.



VJAA carefully modeled the boathouse's surfaces with inset doors and a projected window wall (opening into a rowing tank) to give the building heft amid stone-and-tile neighboring buildings.

With a deft use of form and materials, VJAA tucked the daylight-filled PORTER BOATHOUSE amid handsome older neighbors

By Nancy Levinson



1. *Parking*
2. *Entry*
3. *Terrace*
4. *Boat-launch apron*

Rowing is the oldest sport at the University of Wisconsin at Madison, and one of the most illustrious. In the past century, the school's varsity crews have won dozens of intercollegiate titles, and Wisconsin rowers were part of every U.S. men's and women's Olympic team from 1968 through 2000. This competitive record is especially remarkable given that for decades the university's rowers trained in a facility that all agree was egregiously inadequate: a one-story concrete boat-storage structure built in 1967 to replace a grand but dilapidated Shingle Style boathouse from the early 1900s. Never commodious, the structure was dated almost right away, when in the early '70s two women's crews more than doubled the program's size. "The old building was dark, dank, and very crowded," recalls Chris Clark, head coach of the men's team. "It was more like a bunker than a boathouse."

Today, memories of the bunker are fading fast: This spring, the rowing program moved into the $8.56 million, 52,000-square-foot, up-to-the-minute Porter Boathouse. Designed by Vincent James Associates Architects (VJAA) of Minneapolis with KEE Architects of Madison, the new structure is as sleek and elegant as a racing shell, with a no-nonsense program dedicated to storing boats and training rowers. Almost the entire 17,000-square-foot ground floor is taken up by a high-ceilinged space that can house more than 200 shells (ranging in length from 28 to 57 feet), as well as all the accoutrements of the sport (hundreds of oars, outriggers, boat slings, etc.). From this space, six garage-style doors open onto a poured-concrete apron and the shores of Lake Mendota. On the second floor are coaches' offices and team locker rooms, as well as a small lounge and a lobby where memento-packed display cases comprise a hall of fame of Wisconsin rowing. The most eye-catching space is the one that contains two moving-water, adjustable-current rowing tanks—valuable equipment in Madison, where the lakes are frozen for much of the winter.

The third level consists almost entirely of a large, light-filled space that can accommodate 150 rowing machines—enough for the entire program. "In the old building, we could fit only about 10 ergometers," says Clark. "Here, everyone can work out together, which is great, not just for training, but for team spirit." Sliding glass panels allow the space to be subdivided in three, according to the training needs of the crews (men's, women's, and light-weight women's); a north-facing terrace provides breathtaking views of Mendota, and in good weather, alfresco

Nancy Levinson, a RECORD *contributing editor, lives in Boston.*

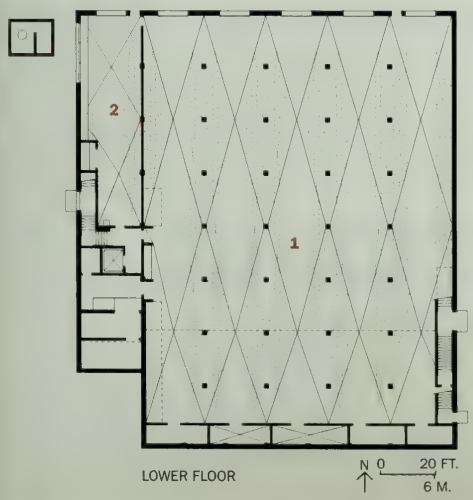
Project: *Porter Boathouse, University of Wisconsin-Madison*
Architect: *VJAA—Vincent James, FAIA, Jennifer Yoos, AIA, Nathan Knutson, AIA, Andrew Dull, Chris Wegscheid, AIA, Lev Bereznycky, Steven Philippi, Paul Yaggie, AIA, Donovan Nelson, Bob Loken, Karen Lu, Carl Gauley, Dzenita Hadziomerovic*
Architect of record: *KEE Architects—David Ewanowski, AIA, Jan Eymann, Douglas Kozel, AIA, Kandy Brouchoud, Peter Crennell, AIA, Paul Cuta, AIA, Rick Gabriel, AIA, Sohail Khan, Assoc. AIA, Linda Page, Michael Zuehlke, AIA*
Consultants: *Strand Associates (structural, civil); KJWW Engineering (m/e/p); Ken Saiki Design (landscape); Jeff Peterson, AIA (rowing)*
Contractor: *Miron Construction*





The new rowing center, set on the site of its predecessor, frames tight vistas to Lake Mendota (left). Above an austere base of concrete surmounted by limestone, the architects created a sail-like silhouette in metal (opposite). Offsetting each monitor in plan encourages a play of light. Landside entry is on the second floor, above the boat-storage level, and beneath the daylighted, workout room (plans, opposite). A top-level terrace opens to the lake (bottom).





LOWER FLOOR



SECOND FLOOR

1. *Boat storage*
2. *Boat repair*
3. *Workout*
4. *Terrace*



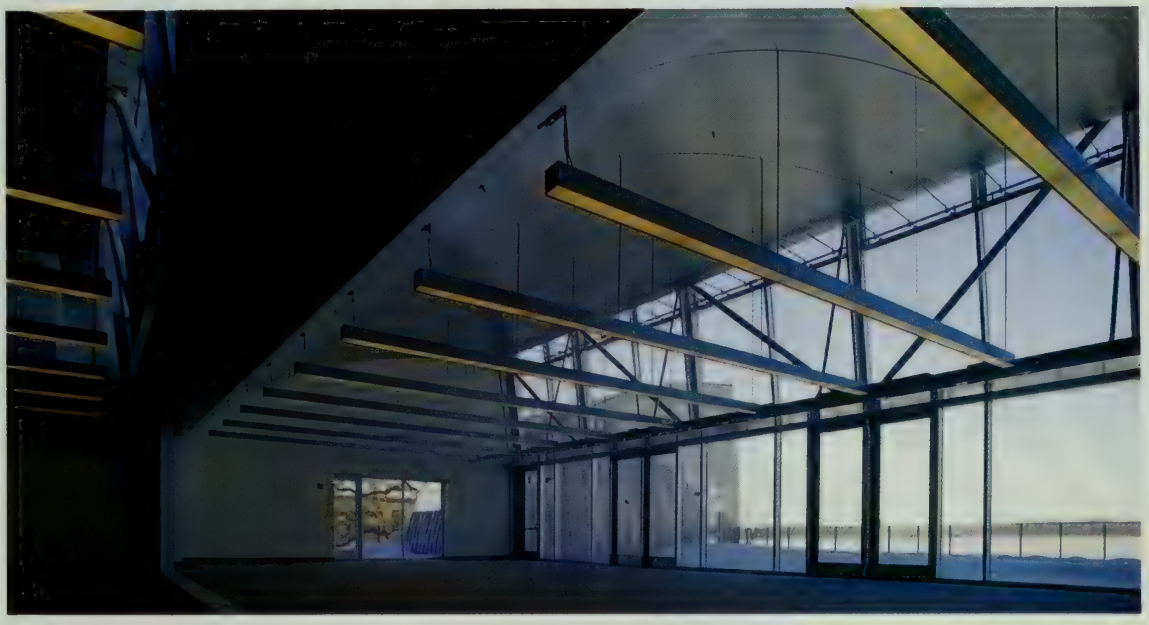


workout space. Saw-toothed monitors with operable windows bring light into the middle of the room; they also enhance ventilation in the un-air-conditioned space, which becomes a true athlete's "hot box" when those ergometers are all whirring.

The design principals, Vincent James and Jennifer Yoos of VJAA, are especially pleased that the university was receptive to a contemporary-style boathouse. (One of the firm's earlier projects was the Modernist Minneapolis Rowing Club Boathouse, on the banks of the Mississippi.) James remembers a sentiment early on to mimic adjacent structures—mostly four-story dormitories built in the '30s, with stone walls and red-tiled, hipped roofs with deep eaves. James convinced the client that this particular idiom, given both the tight site (exactly where

A CONTEMPORARY FORM USING TRADITIONAL MATERIALS WON OVER AESTHETIC SKEPTICS.





Translucent doors daylight boat-storage and repair bays on the ground floor (opposite, top). The top floor, now filled with ergometers (not shown in these early photos), offers a workout area that faces views of Lake Mendota (bottom). South-facing windows are inset (top). Sidelighting is balanced by toplight from clerestories, which vent heat generated by rowers. Operable windows (opposite, bottom) supply fresh air. To share its long horizontal loads with the vault, the window wall gently cants.

the earlier boathouse had been) and the space needs of the program, would make the boathouse look like a bloated version of a fast-food franchise. "We made a model with a hipped and tiled roof," he says, "and because we felt the point was important, we even added Burger King signage." The three-dimensional argument was so convincing, says Alan R. Fish, Wisconsin's vice chancellor for facilities and planning, "that it had us looking for the drive-through window." The hipped roof was history. The design has drawn praise even from early skeptics. It didn't hurt, Fish notes, that the architects chose materials—poured concrete and limestone for the walls, tern-coated copper for the scooped roofs—that complement the surrounding masonry architecture and echo the metal roof of the nearby university observatory. "Those of us who favored the nontraditional approach," says Fish, "were able to argue that the new boathouse was not trendy, but timeless." And ultimately the building itself has proved the strongest argument. "When I saw the proposal, I thought the design looked cold and austere," says the women's head coach, Bebe Bryans. "But the building itself is anything but—it's very warm and welcoming, a fantastic environment for both working and working out."

Coach Clark views the new boathouse as crucial not just to maintaining but improving Wisconsin's record. "Because rowing is an endurance sport," he says, "there's a tight correlation between training time and ultimate performance." A lousy facility can make the strenuous regimen feel even tougher. Adds Clark, "I expect that in the next couple of years we'll see the advantages of the new place reflected in our results." ■

Sources

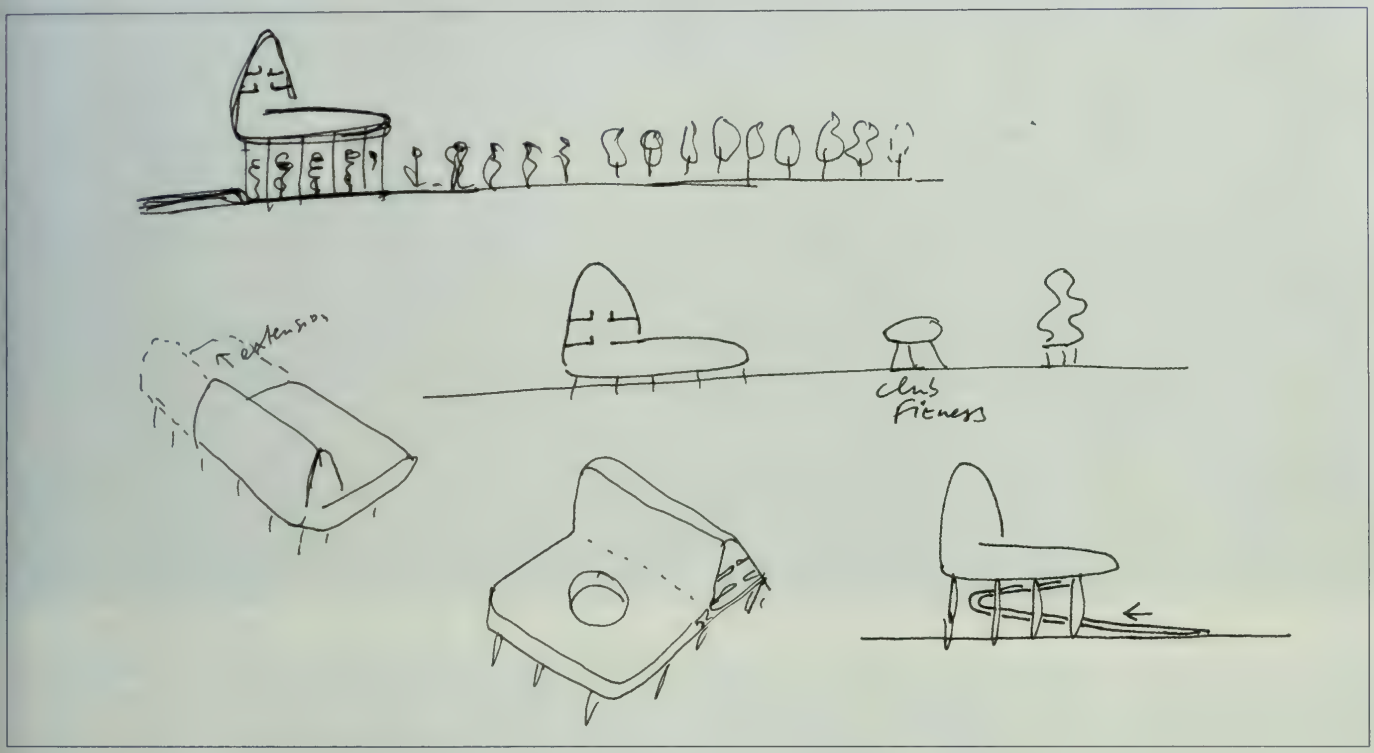
Exterior stone: *Anamosa limestone*
Roofing: *Una-Clad (terne-coated copper); Firestone (EPDM)*
Curtain wall, windows, entrances: *Vistawall*
Glass, glazing: *Interpane; Oldcastle Glass Wausau*
Overhead doors: *Arm-R-Lite*
Epoxy terrazzo: *Terrazzo & Marble Supply*
Lighting: *Cooper*

For more information on this project, go to Projects at **www.architecturalrecord.com.**



The perforated-steel exterior shell of the entrance facade continues over the roof of the executive wing and the top of the one-story factory, ending in a curved bull nose at the rear.

Bernard Tschumi's sleek, curvilinear skin heightens the profile of the VACHERON CONSTANTIN HEADQUARTERS AND FACTORY outside Geneva



By Suzanne Stephens

Turning to architecture to help beef up a company's corporate identity seems to be an obvious strategy. You only need to look at Manhattan's Woolworth, Chrysler, and Seagram Buildings to see how this has worked smashingly well in the past. But these are skyscrapers. If the company is moving to a light industrial zone near Geneva, Switzerland, it means making an impact with less height in an amorphous landscape of highways and factories.

The Vacheron Constantin Headquarters and Watch Factory at Plan-les-Ouates demonstrates, nevertheless, that such image enhancement can be done with a showy, sophisticated finesse. Designed by Bernard Tschumi, a Swiss-born architect with offices in New York and Paris, the tautly crafted carapace of shiny, perforated steel seems to float above a town also staked out by Piaget, Rolex, and Patek Philippe.

On a relatively flat, 7-acre site, the sinuously curved, shimmering, 130,000-square-foot form rises above a grassy lawn to a four-story height. Executive offices for 90 fill 85,000 square feet of the space, before the structure drops down to a single story housing a 47,000-square-foot factory for 80 watchmakers. (The building is designed to accommodate 250 in the future.) Since many employees drive to work, Tschumi placed the parking along a slope planted with trees, and scooped out the ground underneath the factory to provide additional parking. As a result, the complex seems to levitate above the earth yet still be anchored in it.

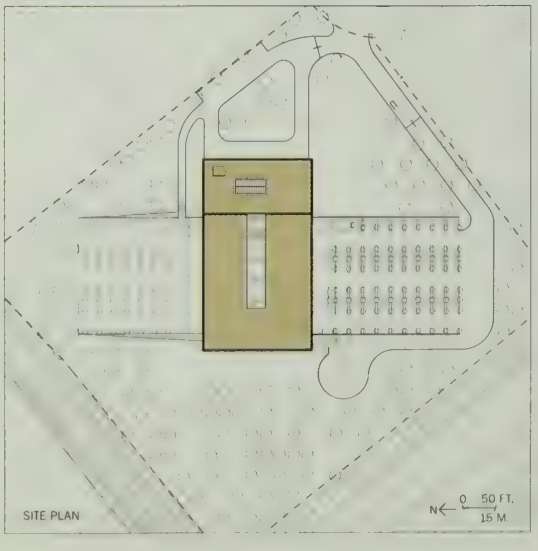
Tschumi's concept sketches (above) illustrate how he brought together the headquarters and factory partis.

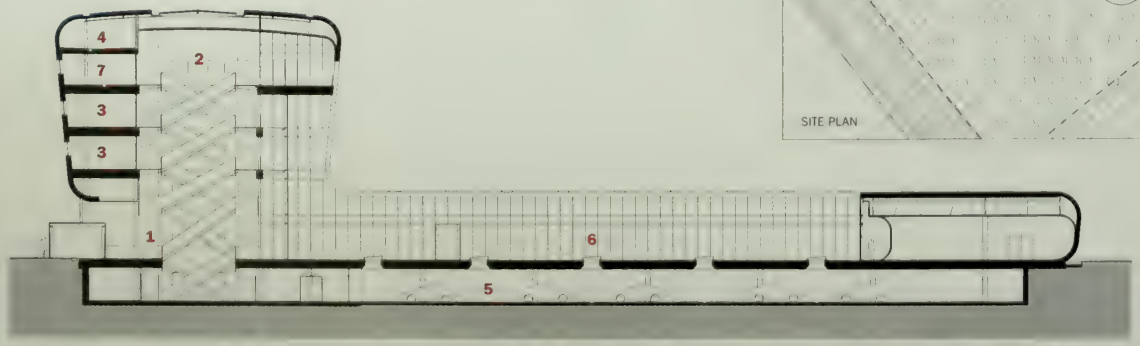
Founded in 1755, Vacheron Constantin can claim to be the oldest continuously running watchmaker in the world. (You only need glance at its costly and highly labor-intensive watches to know this isn't Swatch.) The company, now part of Richemont International, a tobacco and luxury goods empire that also owns Cartier, decided it should consolidate its management, marketing, and production under one roof. The new building would not only bolster the watch company's image in relation to other high-profile competitors, but would do so in a way that would presumably encourage interaction and communication among the employees. The move would mark the

Project: *Vacheron Constantin Headquarters and Watch Factory, Plan-les-Ouates, Geneva, Switzerland*
Architect: *Bernard Tschumi Architects (New York); Bernard Tschumi urbanistes Architectes (Paris)—Bernard Tschumi, Véronique Descharrières, partners in charge; Joel Rutten, Alex Reid, project architects*
Owner: *Vacheron Constantin, Richemont International*
Engineer: *Arup and SGI (structural); Arup and Enerconom (mechanical and HVAC)*
Landscape: *Michel Desvigne*

1. *Entrance lobby*
2. *Atrium*
3. *Administrative offices*
4. *Mechanical space*
5. *Covered parking*
6. *Indoor court*
7. *Kitchen*

The main (visitors') entrance to Vacheron Constantin faces east (above and opposite, top), where the triple-glazed base barely hints at the atrium within.





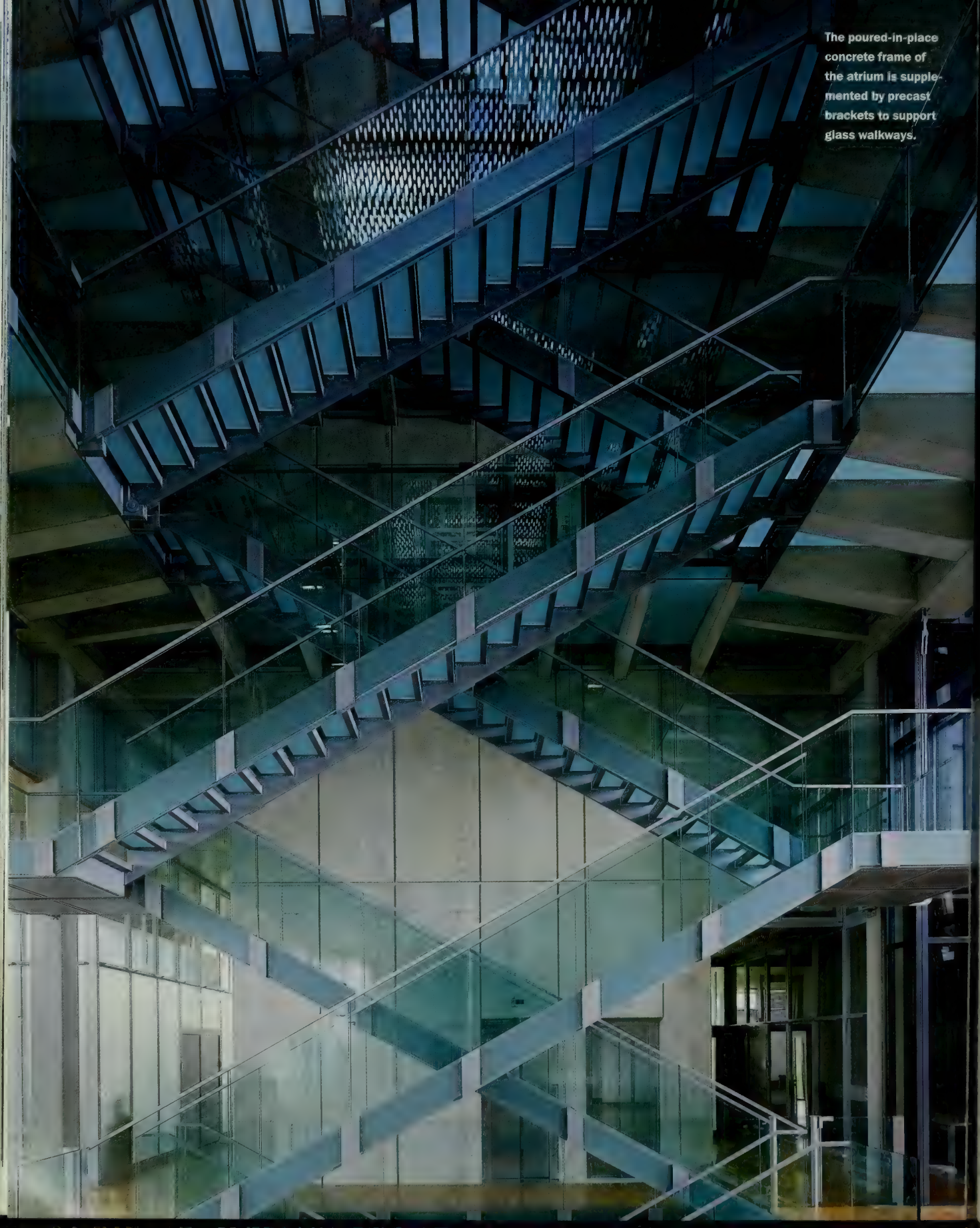
SECTION A-A

0 20 FT.
6 M.

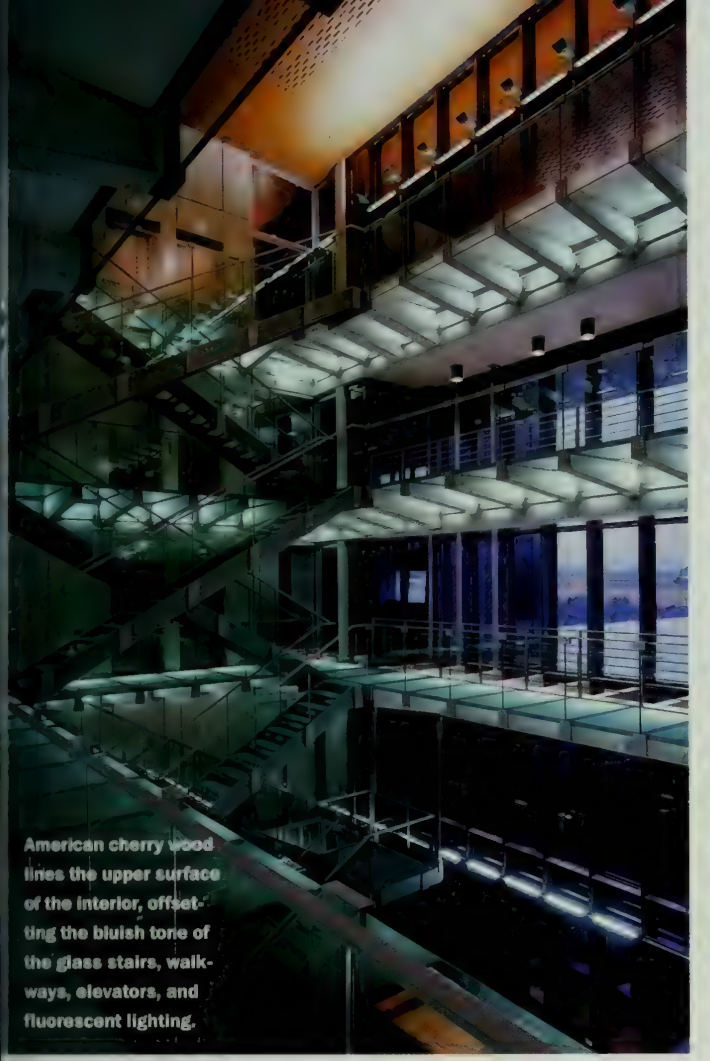
PHOTOGRAPHY: ©PETER MAUSS/ESTO (TOP)

Executive offices are enclosed by full-height glass curtain walls on the north and south facades (above). Landscape architect Michel Desvigne planted trees in a sloping parking lot, which continues (without the trees) under the factory.

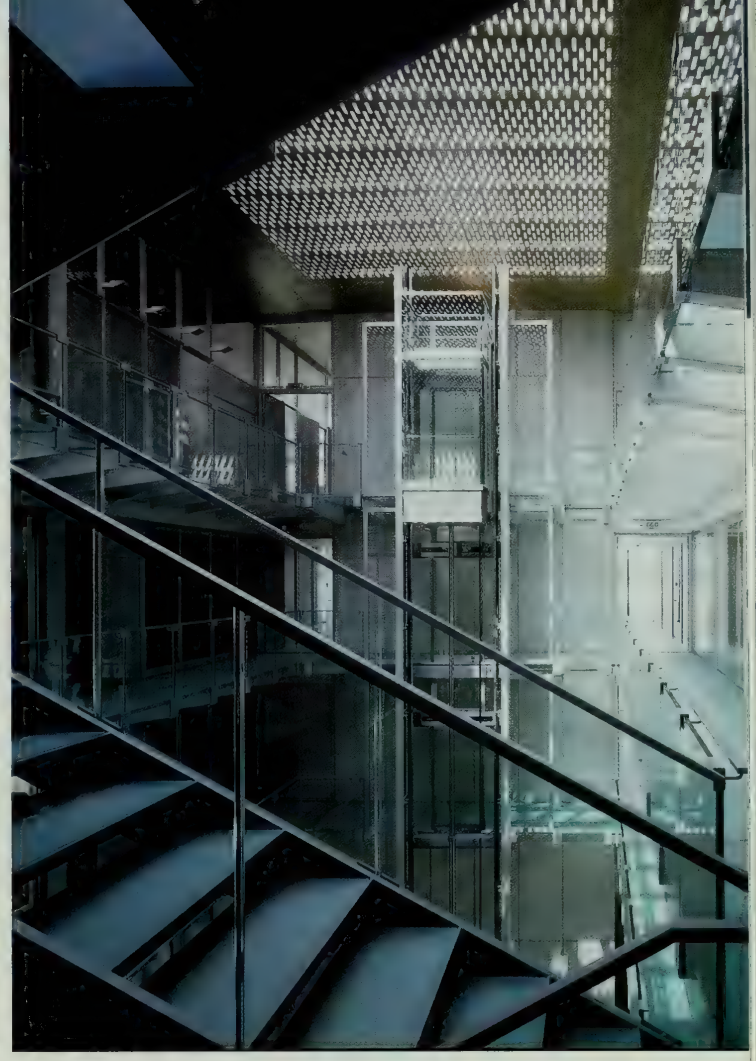




The poured-in-place concrete frame of the atrium is supplemented by precast brackets to support glass walkways.



American cherry wood lines the upper surface of the interior, offsetting the bluish tone of the glass stairs, walkways, elevators, and fluorescent lighting.



company's 250th anniversary.

The jury, led by Alain-Dominique Perrin, the former Cartier C.E.O. who was instrumental in realizing Jean Nouvel's design for Cartier Foundation in Paris (1994), invited Tschumi and four other architects—Nicholas Grimshaw and John Paulson of England, Gae Aulenti of Italy, and Spanish architect Carlos Ferreter—to develop schemes for a building that would unmistakably announce the quality of its product—past and future. Tschumi and Paulson, the two finalists, came up with pared-down schemes. But only Tschumi's exploited the sheen, curves, and complex joinery evocative of Vacheron Constantin's own casings, wristbands, and watch faces with a design where roof and walls are melded into one steely surface encompassing the two-part program.

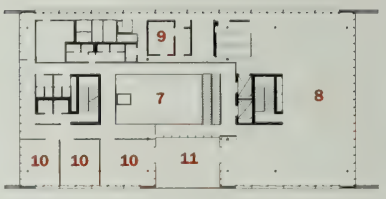
Although in his most recently published book, *Event-Cities 3: Concept vs. Context vs. Content* (MIT Press), Tschumi contends that "Concept, not form, is what distinguishes architecture from mere building," you want to argue that the concept—or the idea—of a continuous surface joining two programs is certainly revealed by form. Under this curved, perforated-steel shell, Tschumi brought together two partis evocative of historic examples of American Modernist workplace architecture: offices arranged around an atrium, seen in the Ford Foundation Headquarters in New York (1968), by Kevin Roche John Dinkeloo, and the horizontal slab of work spaces arranged around an interior court, found in the American Can Building in Greenwich, Connecticut (1970), by Gordon Bunshaft of Skidmore, Owings & Merrill. Although executives and watchmakers go to separate quarters, they both use the atrium to meet in the buffet restaurant on the fourth floor.

While the curvilinear steel casing fluidly wraps exterior walls and roof (including the horizontal factory roof, where a pan installed below the perforated-steel covering catches and drains rainwater), Tschumi has not tried to make it appear to grow organically out of the stalwart concrete frame underneath. Indeed, the metal skin rests on a steel frame at the top of the poured-in-place concrete structure. You can distinguish the skin from the frame as you can the executive offices from the factory in a dialectic between the container and the contained.

The muscularity of the concrete structure in the atrium offers an arresting counterpoint to the lightness, transparency, and translucency of the glass stair treads, walkways, and walls: Again, the duality in materials between the stolid and the ethereal gives the hall its dramatic presence. Tschumi also lined the casing's curved underside in American cherry wood. Its warm reddish hue emanates through the atrium's interior, offsetting the bluish fluorescent lighting.

In the factory where the craftspersons put together the watches, make adjustments, or provide after-sales service (another facility in Vallée de Joux is devoted to the development of movement, finishes, and surface treatment), the program called for light and superclean surfaces. The workstations in the one-story wing receive daylight

Glass walkways (below) on the west side of the atrium overlook the factory. Watchmakers enter the factory from the parking level, where they stow their coats before ascending to the air locks upstairs, where they don white smocks and slippers for the dust-free workshops (bottom). Here, ventilation, temperature, and humidity controls are stringent for the 80-person ateliers. A conference room on the northeast corner of the ground-floor entrance facade of the administration building features wood floors and ceiling with views out to the landscaped lawn through glass curtain walls (opposite).



TOP LEVEL



MAIN LEVEL

1. *Lobby*
2. *Exhibition*
3. *Conference room*
4. *Interior courtyard*
5. *Workshops*
6. *Technical offices*
7. *Atrium*
8. *Restaurant*
9. *Kitchen*
10. *Private dining rooms*
11. *Outdoor terrace*





through north-facing glass walls, while two banks of workrooms look onto an interior glassed-in court. Since the workrooms must be completely dust free, the plan of the one-story portion includes air locks, or sealed vestibules, glassed-in corridors, and dressing rooms for putting on lab coats and protective shoe coverings.

The success of the building's imagery owes much to the quality of the craftsmanship, which is striking, considering the $20 million budget. It is hard to imagine this level of craft being achieved in the U.S. for this money, and the difference is known only too well to Tschumi, who has built both here and abroad. In this particular instance, he designed the project in his New York office, but carried out design execution in his Paris office with his partner there, Véronique Descharrières. Ultimately, it is the craft—along with the form and the concept—that created this clarified, immaculate structure distinctively looming up from its suburban setting. So in sum, we would like to amend Tschumi's proposition: It is the concept revealed in form and realized by craft that distinguishes architecture from building. ■

Sources
Stainless-steel exterior wall and roof, metal/glass curtain wall, glazing, skylights: *Hevron*
Concrete structure: *Perret*
Acoustical ceilings and paneling: *Fournier Steiner*
Paints and stains: *Riedo + Fils*
Lighting: *Badel + Cie*
Office furniture: *Saporetti*

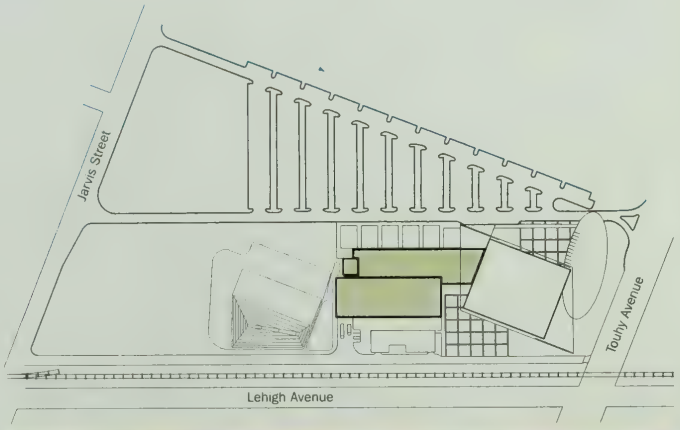
For more information on this project, go to Projects at **www.architecturalrecord.com**.





The 70,000-square-foot technology center (foreground) extends out from the headquarters building designed by Murphy/Jahn (background).

Krueck & Sexton designed the sleek new SHURE TECHNOLOGY CENTER to complement an existing building and define a corporate campus





Krueck & Sexton designed the technology center (foreground in photo) as a series of boxes sliding past each other and toward the headquarters.

By Cheryl Kent

Shure Technology got a bargain when it bought a spanking, brand-new, architecturally bold headquarters from HALO, the bankrupt company that commissioned it. Shure had just spent two frustrating years on fruitless negotiations for a site for its new headquarters elsewhere in suburban Chicago. Purchasing the existing building in Niles, Illinois, seemed to put the company exactly where it wanted to be: in a space that projected a strong image to the public and featured state-of-the-art systems (such as silent, polished steel-and-glass elevators with exposed mechanical systems) and the amenities to satisfy prized employees. It was a big step up for a company that had been housed in separate factorylike buildings for decades.

Then, the company's executives reconsidered their needs and realized they wanted more than even the new building could provide. So Shure, a privately held company that is a leader in the audio industry, considered certain functions it had never performed before. Product tests, which had been outsourced, might now be done in-house. A radio-frequency chamber for testing new wireless products and a sophisticated recording studio and sound room where artists could try new things with the company's equipment also showed up on the wish list. Soon it was clear the building would have to be enlarged.

When it first contemplated a new building, Shure had talked with Chicago-based Krueck & Sexton Architects. Now the company brought the firm back to design the addition to the HALO facility. As the conversation between client and architects continued, the project grew from 25,000 to 70,000 square feet.

Shure wanted to respect the existing building, which had been designed by Murphy/Jahn, but insisted that it be connected to the new structure. Designing an independent building would have made compatibility between the two an easier problem to solve, but the purpose of the move was, in part, to consolidate the company's engineering and design departments with its corporate offices.

As architecture firms, both Krueck & Sexton and Murphy/Jahn have identifiable approaches to design and are quite different from one another. While Murphy/Jahn's designs are often single, arresting gestures conveyed in an instant, Krueck & Sexton's work tends to be subtle and nuanced, yielding more satisfaction the longer one looks. A bad painting or unworthy chair could disrupt a Krueck & Sexton interior; in a Murphy/Jahn project, a wrong move might have less impact, subsumed by its environment.

Krueck & Sexton's addition for Shure honors both sensibilities. As the starting point for its own design, the firm borrowed a recurring angle from the existing building, canting its steel-frame technology center off Murphy/Jahn's concrete-frame headquarters. Sliding the new building under a high glass canopy that is one of

Cheryl Kent writes about architecture from Chicago and is the author of Santiago Calatrava: Milwaukee Art Museum, *to be published this month by Rizzoli.*

Project: *Shure Technology Center, Niles, Illinois*
Architect: *Krueck & Sexton Architects—Ronald Krueck, FAIA, design principal; Mark Sexton, AIA, project principal; Thomas Jacobs, Assoc. AIA, project director; Antonio Caliz, project architect; Greg Schmidt, Jake Watkins, Ulrik Weinert, Parus Kiravanich, project team*
Interior designer: *Jeanne Hartnett & Associates*
Engineers: *Tylk Gustafson Reckers Wilson Andrews (structural); CCJM Engineers (mechanical); Cowhey Gudmundson Leder (civil)*
Consultants: *Daniel Weinbach & Partners (landscape); Schuler & Shook (lighting); Kirkegaard Associates (acoustical)*
General contractor: *Harbour Contractors*



the most identifiable features of the Murphy/Jahn design, Krueck & Sexton created an addition that is both an insertion into a corporate complex and an extension of an existing hall. It is an ingenious solution that announces both separation and affinity between the two parts. This device has the added advantage of siting the new structure parallel to a long driveway, thereby establishing an orthogonal character for the project. From this point forward, the addition is driven by four-square geometry. The building becomes a unique entity with a character all its own.

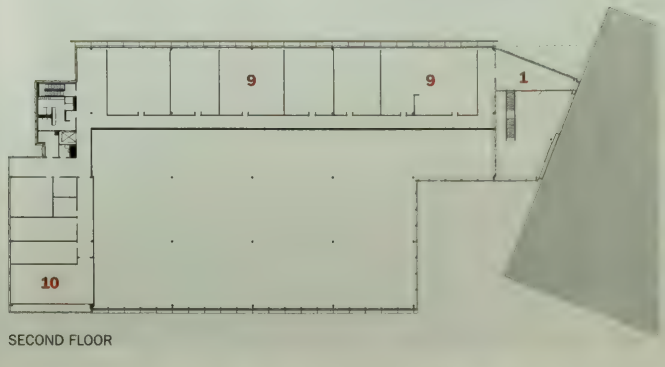
This character is horizontal and dynamic with volumes and surfaces changing subtly but continuously on every side, bringing to mind the Rietveld-Schroeder House in Utrecht or a Mondrian rendered in three dimensions. In plan, the addition resembles two rectangular boxes with one sliding ahead of the other. One box contains the engineering-team areas and other offices, the other—a two-story space with 40-by-50-foot clear-span bays—holds specialized testing and performance facilities and a shop for building prototypes. The sliding-box motif is applied to section and elevations as well. For example, a white cube containing mechanicals pushes out from the east side of the building. Similarly, the entire second story is pulled forward from the base, creating a sheltered walkway below

1. *Lobby*
2. *Labs*
3. *Anechoic chamber*
4. *Listening center*
5. *Service department*
6. *RF chamber*
7. *Model shop*
8. *Loading dock*
9. *Engineers*
10. *Archival center*

Krueck & Sexton protected the east facade (above and opposite bottom) with a louvered screen, while clear, low-E glass allows views inside (opposite, top).



FIRST FLOOR



SECOND FLOOR

Italy - the World Hub for Quality Stone and Craftsmanship

There are many works of art by Italians that are not found in Museums. Since the dawn of civilization, Italians have created and exported some of their most lasting works of art in Natural Stone: statues, floors, balustrades, columns, countertops stairs, facades and other architectural elements that are found in buildings around the world. The craftsmanship of Italian stone industry workers has been well respected around the world for centuries.

This skill and dedication are one of the reasons that Italy is the hub of the international block trading industry. Italian stone materials are world-renowned for their beautiful, wide range of colors and sizes and the country has long been one of the world's leading producers of raw materials. More than 10.5 million tons of block per year are quarried and processed at close to 10,000 companies in Italy by 60,000 of the world's most highly skilled craftsmen.

But it's not only Italian marble. Blocks from every stone producing country in the world are shipped to Italy to be sawn, fabricated, and finished for projects around the world. More than 2.3 million tons of raw materials with a value of nearly 500 million USD are brought into Italy each year for processing. Another 3.5 million tons of product, most of which is finished, is exported at a value of more than 2 billion USD.

An architect looking for the largest selection of commercially available stone on the international market can find it only in Italy. Its two main production centers, Carrara and Verona, have the world's largest selection of blocks and slabs from all over the world -- waiting for that creative touch of Italian craftsmen.

Much of this stone goes to the United States. Italy supplies close to two times more stone to the United States than any other foreign supplier, but only about one third of that is extracted from quarries in Italy. The rest comes from other countries in block form and is processed into slabs, tiles or custom forms by Italian craftsmen.

This talent and experience are sought after for many projects, especially in the United States. Colorado's Denver International Airport is one of those. Like many states, Colorado requires a certain percentage of local materials for all public buildings, and this project called for white Colorado Yule marble. Because of their skill and efficiency in large commercial projects, Italian stone craftsmen were brought to Colorado to oversee quarrying of the blocks, which were sent to Italy to be processed and finished before being returned to Denver for installation.



Architects of the Getty Center in Los Angeles also sought the expertise of Italy's stone craftsmen to develop special splitting machinery for the more than 1,000 containers of travertine quarried in Italy and used on this gorgeous building.

These are not isolated projects. Companies in the Italian stone industry are continually involved in quarrying and final installations for thousands of commercial projects in all parts of the world. Why? Because Italy is one of the few countries with a stone industry that has the winning combination of a large pool of labor experienced in hand work and CNC machinery; the largest concentration of commercially available stones and blocks for cut-to-size projects; and one of the highest concentrations of stone machinery manufactures in any single country. Italy also hosts two of the industry's most important annual international events, the Carraramarmotec in Carrara, Italy (June 1-4, 2005) and the Marmomacc in Verona (Sept. 29 - Oct. 2, 2005).

To learn more about the exciting Italian stone industry and to obtain a complimentary copy of the MARMORA, a full-color plate book of approximately 80 stones quarried in Italy, contact the Italian Trade Commission in Los Angeles at **1-323-879-0950**, via email at **losangeles@losangeles.ice.it** or visit their website at **www.marblefromitaly.com.**

Italian Trade Commission
Los Angeles

CIRCLE 46 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



McGraw-Hill CONSTRUCTION
Architectural Record
ENR
Regional Publications
nd us online at www.construction.com
The McGraw-Hill Companies









CIRCLE 46 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

embrace it

Looking at the world for the next generation means choices and embracing the choices we make. At InPro Corporation, we embrace our next generation of wall protection products, the Original EnviroGT™ Sustainable Wall Protection products.

the ORIGINAL ENVIROgt Sustainable Wall Protection EST. 2001 InPro Corp

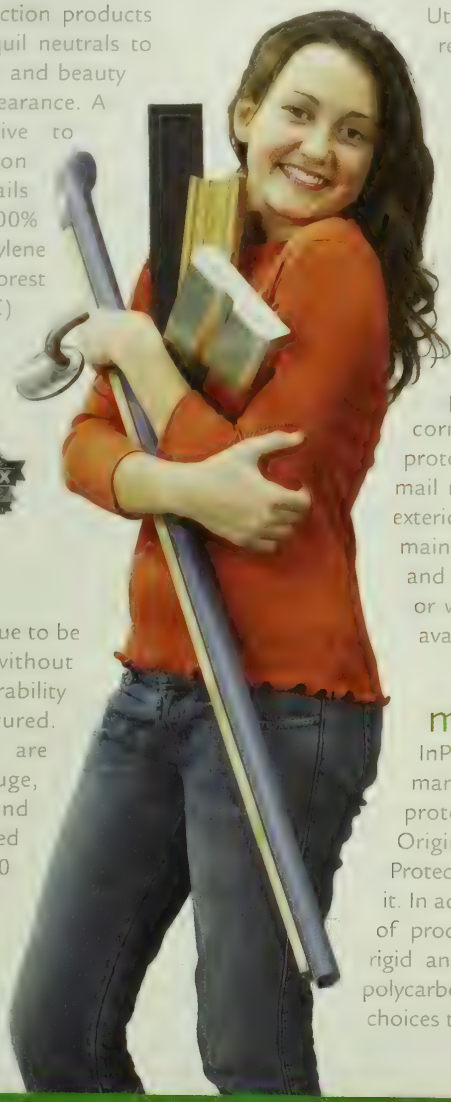
choices...

GT Series

Durable, PVC-free wall protection products in colors ranging from tranquil neutrals to electric brights, offer strength and beauty without the institutional appearance. A more sustainable alternative to traditional wall protection products, GT series handrails and wall guards use 100% recycled high density polyethylene (HDPE) covers mounted on Forest Stewardship Council (FSC) certified wood retainers while GT series corner guards utilize 100% recycled HDPE for covers and retainers

BUILDINGGREEN 2003 TOP-10 GREENSPEC® PRODUCT

ADEX



Stainless Steel

Recycle steel and it can continue to be used again and again without impacting the strength and durability of the products manufactured. Stainless steel wall guards are manufactured from 16 gauge, Type 304 stainless steel and corner guards are manufactured from 16 gauge, Type 430 stainless steel. Classic stainless steel products provide protection to walls that endure constant abuse.

Bamboo

Utilizing one of the earth's most rapidly renewable resources, we have brought the beauty of bamboo to wall protection. Two styles of handrails and a coordinating chair rail are available in a clean natural finish or a warm carbonized finish. Bamboo is as hard and durable as traditional hardwoods such as red oak and maple.

Nu·Tree™

Manufactured from your recycled # 2 plastic containers, Nu·Tree™ wall and corner guards are the heavy duty protection choice for back of house areas, mail rooms, loading docks and even some exterior applications. Easy to install and maintenance free, Nu·Tree's corner guard and seven wall guards are available in black or white. Four earth tone colors are also available for all Nu·Tree wall guards.

more choices

InPro Corporation is the first manufacturer to introduce sustainable wall protection products. We embrace the Original EnviroGT Sustainable Wall Protection and will continue to expand upon it. In addition, we will always offer our full line of products manufactured from aluminum, rigid and flexible PVC, maple, red oak, and polycarbonate. We believe in providing product choices to our customers for all applications.

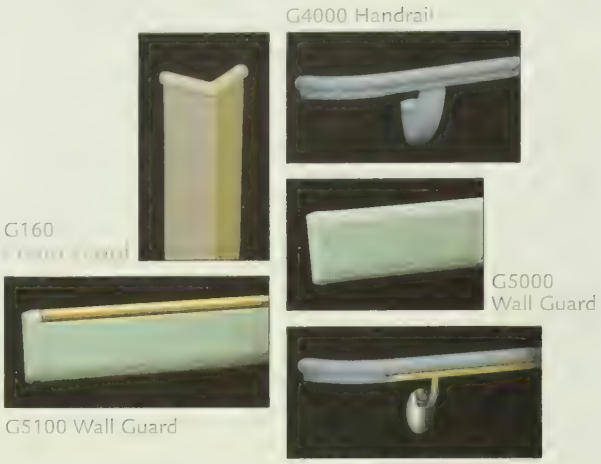
INPRO CORPORATION
Interior and Exterior Architectural Products

800.222.5556 · inprocorp.com

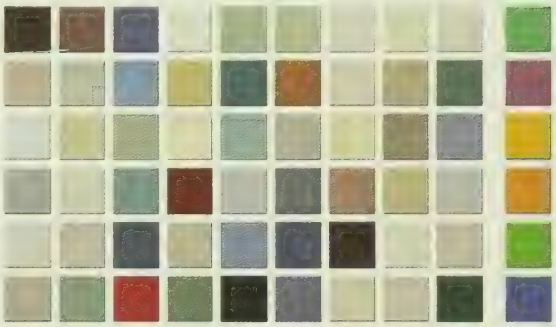
McGraw Hill CONSTRUCTION Architectural Record ENR Regional Publications
nd us online at www.construction.com
The McGraw-Hill Companies

GT Series

Qualifying LEED-NC Credit:
MR Credit 4 – Recycled Content
MR Credit 7 – Certified Wood

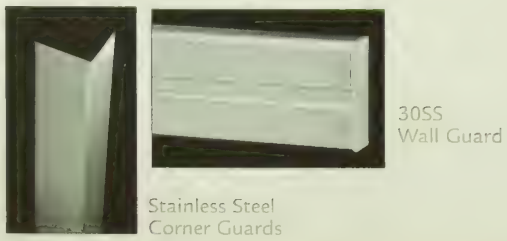


Available in 60 colors - 54 standard and 6 brights



Stainless Steel

Qualifying LEED-NC Credit:
MR Credit 4 – Recycled Content



Bamboo

Qualifying LEED-NC Credit:
MR Credit 6 – Rapidly Renewable Materials



Available in
Natural or Carbonized Bamboo



Nu·Tree™

Qualifying LEED-NC Credit:
MR Credit 4 – Recycled Content



Visit inprocorp.com for complete product information including specifications installation in CAD and CAD drawings.

Printed with soy ink on recycled fiber including 30% post-consumer fiber

InPro Corporation
Interior and Exterior Architectural Products

800.222.5556 · inprocorp.com

S80 W18766 Apollo Drive
Muskego, WI 53150

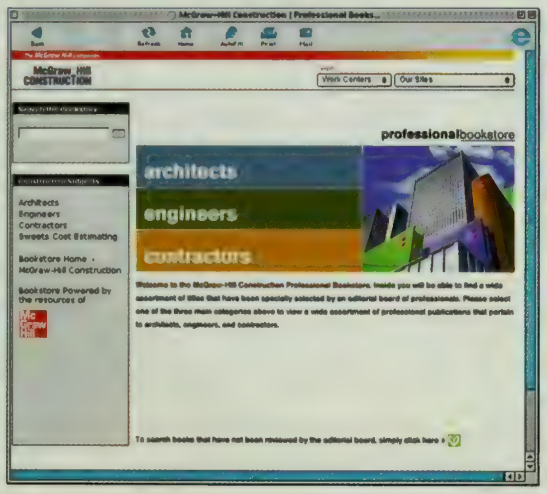
CIRCLE 46 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

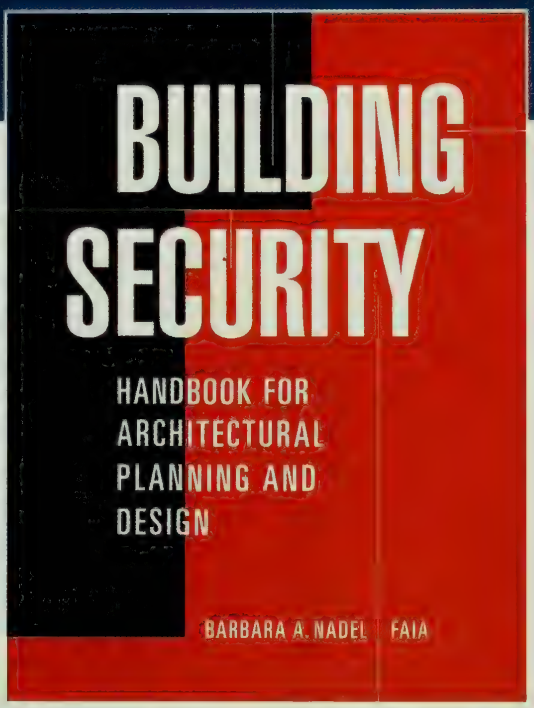
Available through the
McGraw-Hill Construction Bookstore

Building Security
Handbook for Architectural Planning and Design
Barbara A. Nadel, FAIA

"This book is a must-read for architects, landlords, security consultants, and anyone else interested in ensuring security and averting catastrophic loss"
–**Bernard B. Kerik**, Former Police Commissioner of NYC

Whether planning for new construction, renovations, or security upgrades of existing facilities, this is THE definitive 21st Century reference on security, design, technology, building operations, and disaster planning. Generously illustrated with 600 photos, drawings, tables, and checklists, ***Building Security*** addresses protection from terrorism, natural disasters, chemical and biological agents, crime, and workplace violence.





2004 • ISBN: 0-07-1411712
672 pages • 600 illustrations • Hardcover

McGraw-Hill Construction Bookstore Price: $71.96

TO ORDER OR TO SEE OTHER GREAT TITLES, VISIT
www.books.construction.com

www.books.construction.com

At www.books.construction.com, you can choose from a wide selection of titles in architecture, construction, and engineering – from the brightest, most respected minds in the field. Our comprehensive online bookstore offers a special **20% discount, free shipping**, unparalleled customer service, and a host of other great features.

construction success starts with the
construction.com bookstore

DDJ21

McGraw Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications

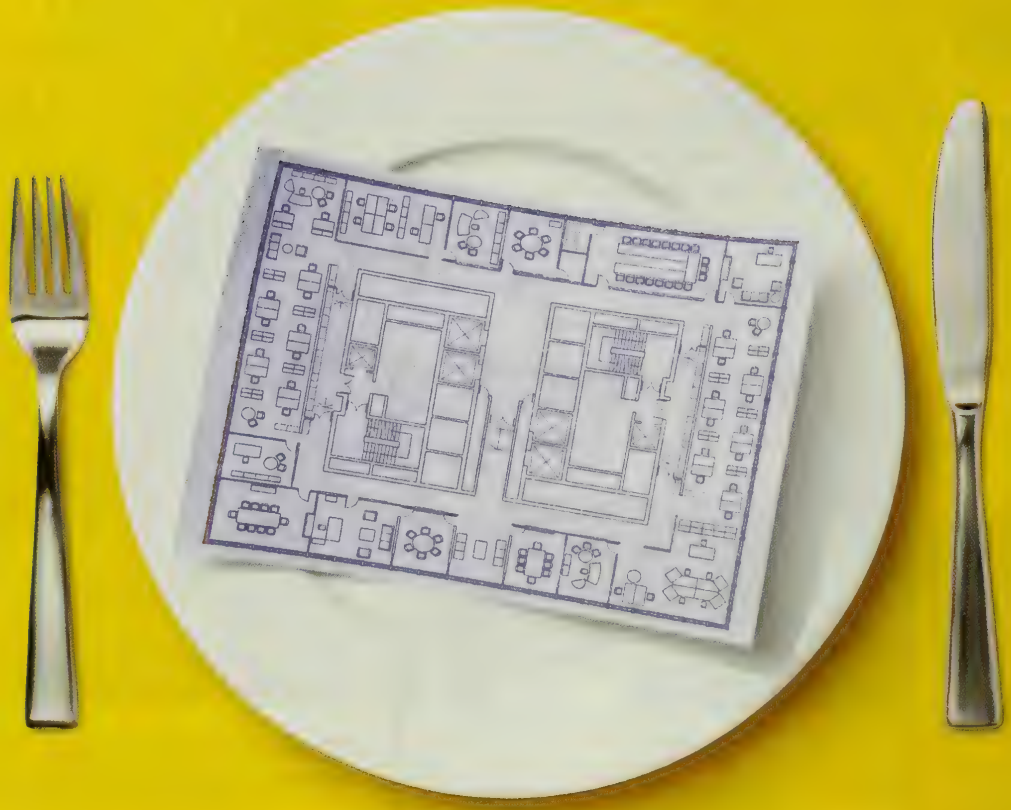
connecting people_projects_products

d us online at www.construction.com

The McGraw-Hill Companies

1. Most walls inside buildings are made of paper-faced drywall.

2. Mold eats paper.



3. If you eliminate the paper you reduce the chances for mold.

4. Georgia-Pacific introduces DensArmor Plus™ paperless drywall.

For office buildings, our revolutionary paperless drywall provides moisture and mold resistance. For free literature on DensArmor Plus, call 1-800-BUILD GP. For technical information, call 1-800-225-6119 or go to www.densarmorplus.com.

GP G-P Gypsum
a **Georgia-Pacific** company

©2005 G-P Gypsum. All rights reserved. DensArmor Plus is a trademark of G-P Gypsum.

CIRCLE 47 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Healing Architecture

FOCUSING ON CLINICS: HOW CAN HEALTH-CARE-FACILITY DESIGN IMPROVE MEDICAL OUTCOMES AND GENERAL WELL-BEING?

By Sarah Amelar



1.

Basel, Switzerland

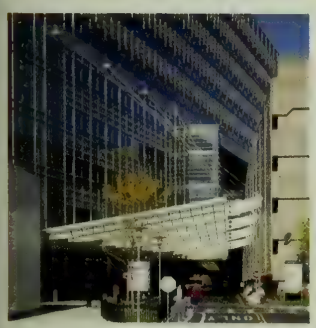
Herzog & de Meuron's rehabilitation center swathes therapeutic courtyards and gardens in fine veils of oak.



2.

Apple Valley, Minnesota

ALTUS Architecture + Design plants a nurturing dental clinic in a field of prairie grass, creating a serene setting, along with ecologically resourceful climate-control systems.



3.

Boston

Cambridge Seven and Michael Fieldman bring order and sunlight into a large urban medical complex—which, like so many others, had grown by piecemeal accretion.

For more information on these projects, go to Projects at **www.architecturalrecord.com.**

Even when we're well, radiant, sunlit interiors with garden or landscape views tend to make us feel better than hermetic, coldly institutional places. It's hardly a lofty concept. And the logic goes, if the surroundings enhance our mind-set, increasing relaxation and reducing stress, then our physical condition—our health and healing processes—will benefit. This thinking rests firmly on twin principles of intuition and experience.

But in the 1980s, behavioral scientist Roger S. Ulrich put this empirical concept under the lens of scientific scrutiny. In a landmark study, he found that surgical patients overlooking a verdant landscape required shorter hospital stays, fewer narcotics, and less nursing care than patients, just across the hall, with brick-wall views. Despite variables in every illness and individual, researchers have rigorously built on this study.

Motivated not merely by a desire for patient well-being, but often by heated competition for patients and top physicians, the emphasis on health-care aesthetics has grown in recent years. Hotel-like birthing rooms, for instance, have become ubiquitous. But are ever-more stylish venues really improving health care?

"Sure, the settings tend to be prettier today—with bigger design budgets—but how much is just skin deep, cosmetic, and formulaic? Are the environments impacting people's lives or health?" asks Wayne Ruga, AIA, founder of the Center for Health Design and the Caritas Project, organizations focused on such questions.

Ruga holds up as a model Planetree, a nonprofit working with health centers to develop holistic environments attuned to patient dignity, privacy, perspective, and sense of control. When "tourists" at Planetree hospitals "think they can just copy the carpeting to get similar results, they're missing the larger picture," he says. "The approach goes much deeper, to an organizational culture centered on the patient." Philosophically and physically the patient becomes the focal point, informing the spatial configuration and design of a quasi-domestic setting that evolves over time.

Aware that each specialized area of medicine brings its own needs, we are presenting three contrasting clinics—all of which shed sunlight on patients. At REHAB, in Switzerland, architects Herzog & de Meuron integrated courtyards into a visually light, noninstitutional, wood-screened structure designed to inspire independent mobility among spinal-cord- and brain-injured patients. For the Dalseth Dental Clinic, in a Minneapolis suburb, ALTUS planted a glassy building amid prairie grasses over a geothermal climate-control system, providing tranquility, as well as ecological benefits. And at the Yawkey Center for Outpatient Care, in Boston, Cambridge Seven and Michael Fieldman devised a master plan that allows sunshine into a new structure on a tight, densely urban site within a larger medical complex.

Hard as it is to quantify the impact of these designs on health and healing, one experience is telling. When visiting REHAB, this writer took a trolley up a hill to the end of the line. En route, several people in wheelchairs boarded, heading for the same destination. But well before the final stop, some disembarked. In spite of brutally hot weather, they sped up the hill, beating the trolley. Apparently the place and its therapeutic program had motivated them. That uphill race speaks for itself. ■

REHAB, Center for Spinal Cord and Brain Injuries
Basel, Switzerland

1 **HERZOG & DE MEURON DEMATERIALIZE THE WALL PLANE AND BRING NATURE INDOORS TO DEINSTITUTIONALIZE A CLINIC.**

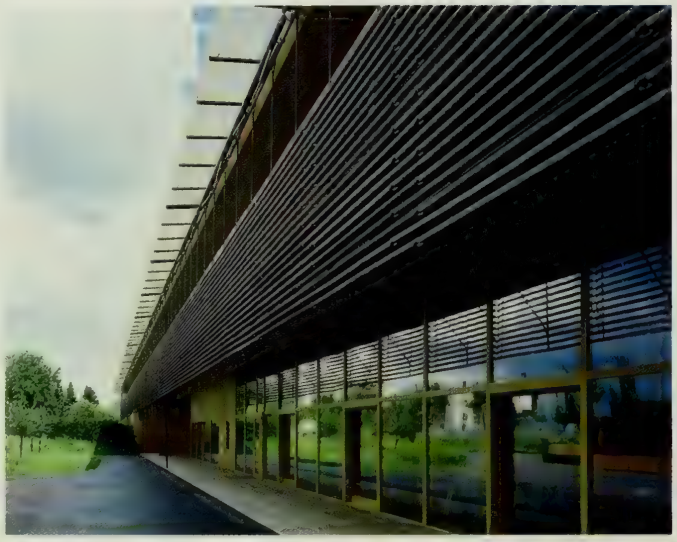
By Suzanne Stephens

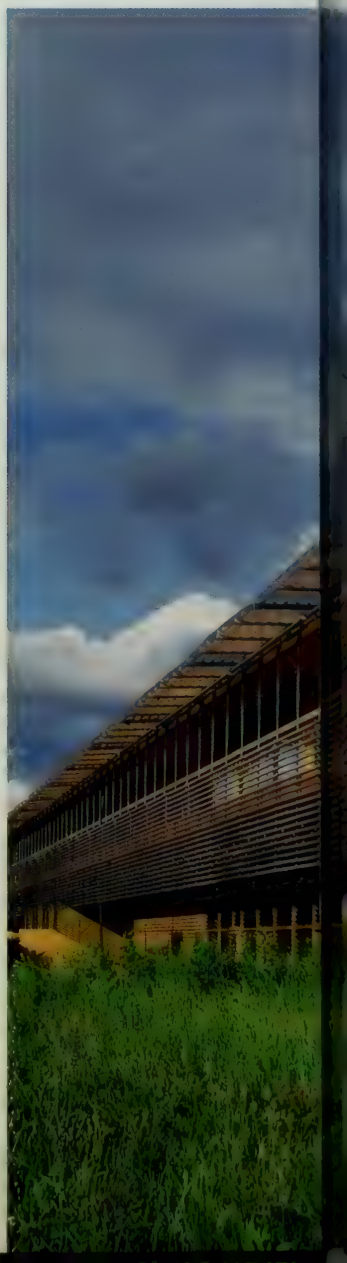
Architect: *Herzog & de Meuron—Arndt Becker, Christine Binswanger, Nandita Boger, Lukas Bögli, Eric Diserens, Raphel Forny, Michael Frei, Mathias Frey, Diana Garay, Stefan Hauswirth, Jacques Herzog, Detlef Horisberger, Jürgen Johner, Andreas Künzi, Lukas Kupfer, Niels Lofteroed, Orna Marton, Sacha Marchal, Mario Meier, Pierre de Meuron, Christine Moser, Camilo Rebelo, Stephan Rüegg, Philippe Schaerer, Ivo Sollberger, Peter Taylor, Camillo Zanardini, project team*
Client: *REHAB Basel*
Associate architects: *Proplaning*
Construction manager: *Hardegger Planung & Projektmanagement*
Consultants: *Ingenieurgemeinschaft ARGE Pauli Frei Zachmann (structural); Sulzer Energieconsulting (energy); Amstein & Walthert (electrical); Bogenschütz (sanitary); August Künzel (landscape); Martin Lienhard (acoustical)*

Size: *246,386 square feet*
Cost: *$110 million*
Completion date: *March 2002*

Sources
Cloth sunshades: *Sunlux 6011*
Door controls: *GEZE Products*

For more information on this project, go to Projects at **www.architecturalrecord.com**.





PHOTOGRAPHY: © MARGHERITA SPILUTTINI, EXCEPT AS NOTED

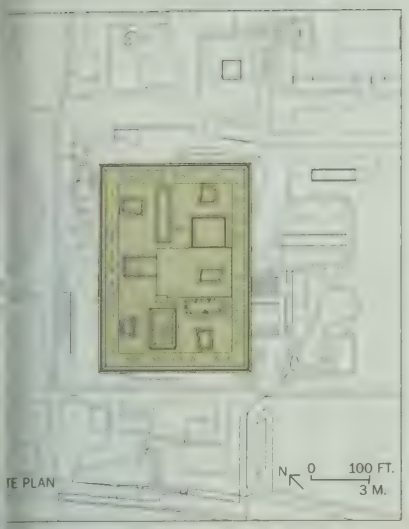
You expect clinics to look, well, clinical—Modernist, austerely immaculate boxes, hygienically white inside and out. REHAB Basel, a privately run clinic for spinal-cord and brain injuries, ingeniously subverts the stereotype while bolstering its therapeutic goals. It appears residential and natural—though not with a funky, down-home earthiness, but a crisply turned-out mien. Here, oak, pine, larch, and ironwood enclose and screen exterior walls, and a rectilinear plan brings daylight and landscape into its precincts through courtyards, grassy roofs, glazed walls, upper-level decks, and skylights.

Program

In providing 92 beds in double and single rooms, where patients with spinal-cord or brain injuries can stay up to 18 months, the clinic directors eschewed the institutional hospital look. Gone is the typical maze of corridors and doors to anonymous rooms. The staff sought to connect patients visually and physically with the landscape while giving wheelchair-bound paraplegics a sense of autonomy. The program called for a day clinic, physical and neurological therapy rooms, medical facilities, conference rooms, a gym, a patient swimming pool, plus overnight accommodations and semiprivate meeting areas for family members.

Solution

Abstractly evoking the plan of a village, with streets, plazas, and houses, Herzog & de Meuron created a build-



At the clinic, grass grows on the roof, wood screens wrap the exterior, and wood decks with overhangs open off the second-floor bedrooms (below). Other noninstitutional touches include landscaped interior courtyards and easily accessible outdoor spaces and gardens (opposite and right). A 262-foot-long wheelchair training course (plan, left) loops around the 6-acre site.



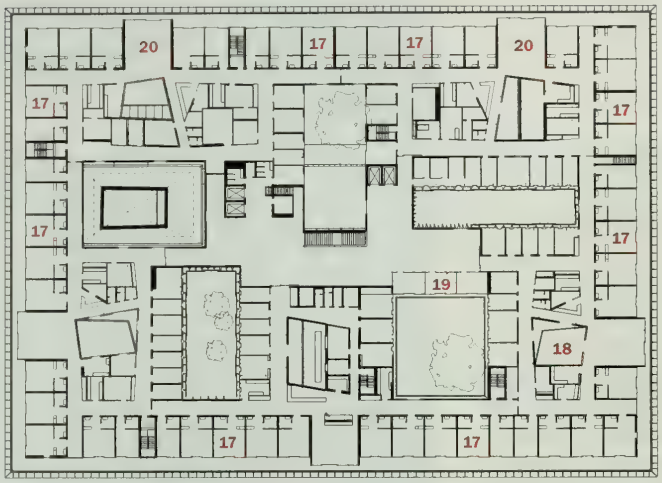




Oak rods are joined by Plexiglas dowels for screens that define outdoor sitting areas (this page) in front of walls of larch and pine. Interior courtyards placed within the clinic's gridded plan (opposite two) help orient the inhabitants within and bring daylight to the interior. For sun protection, cloth shades drop between wood rods over the glass walls.



FIRST FLOOR



SECOND FLOOR

1. *Entrance court*
2. *Outpatient rooms*
3. *Day hospital*
4. *Cafeteria*
5. *Administrative offices*
6. *Reception*
7. *Neuropsychology*
8. *Occupational and speech therapy*
9. *Therapy pool*
10. *Physiotherapy*
11. *Multipurpose space*
12. *French garden*
13. *Intensive care*
14. *Medical services*
15. *Diagnostics*
16. *Courtyard with pool*
17. *Patients' bedrooms*
18. *Services*
19. *Offices*
20. *Lounge/dining*

ing that integrates five courtyards into a three-story structure. The architects felt that a low-rise horizontal organization with large floor plates, totaling 246,386 square feet, rather than a tower configuration, would promote independent movement by wheelchair. (Elevators take patients from floor to floor.) On the two major levels, rooms for specific functions fill sections of the grid, forming volumes like superblocks—in some cases, cranked slightly within the orthogonal framework.

The most striking feature of the building becomes evident in approaching the clinic. Herzog & de Meuron swathed the structure—a concrete deck with steel columns—in a fine screen of slender oak rods over glass and larch and pine-paneled exterior walls. The wooden veil, with Plexiglas dowels that glisten in the light among the horizontal and vertical rods, adds texture to the entire complex. These brise-soleils not only filter the light (supplemented by off-white cloth shades), but afford a degree of visual privacy, as well. As Christine Binswanger, the project architect, observes of the gray and tan wood rods, "Wood weathers—it is not meant to look so perfect."

Since one arrives here through an open courtyard edging REHAB's café, the clinic's actual identity only becomes clear on seeing the reception desk at its center. Courtyards, given distinct identities through planting or water features, also orient visitors and patients: Each court signifies a different locus of therapeutic activity.

To ensure patient privacy, the architects placed bedrooms along the second floor's layered perimeter, where sliding glass doors open onto expansive wood decks wrapping the building. The decks, sheltered by wood roofs, offer panoramic views to the surrounding residential area (providing a sense of floating detachment from the surroundings that recalls the experience of Hans Castorp on his sanatorium balcony in Thomas Mann's *The Magic Mountain*.) Transparent plastic spheres, 7 feet in diameter, embedded in the bedroom ceilings bring in sunlight from above, making artificial illumination hardly necessary during the day. Herzog & de Meuron







Like an inert creature from the deep, the roof of the pool for therapeutic swimming looms up inside one of the courtyards. The concrete pyramidal form is covered in black rubber with round skylights to allow a haunting light to permeate the interior.



added bedrooms and conversation areas on a third level, where visitors can spend the night and meet with patients while overlooking the grass that covers the rest of the rooftop.

In one of the courtyards in this calm, serene setting, an irregular pyramid of concrete punctured with round skylights comes as a bit of a surprise. The mysterious angular hulk, shrouded in a black rubber, contains a dimly luminous swimming pool—a dramatic antidote to the rest of the center's abundant daylight.

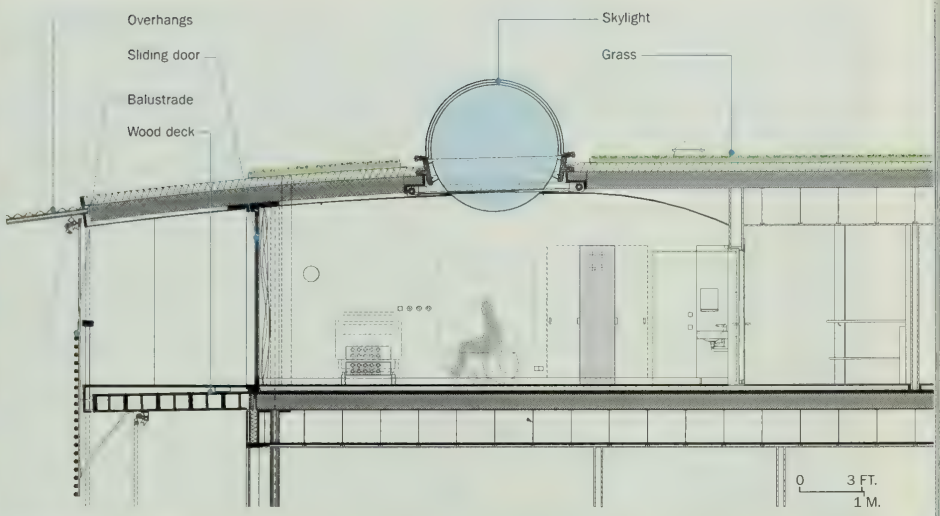
Commentary

The clinic's orthogonal plan and the street/house/plaza motif bring to mind the master plan for the Free University of Berlin (1963–79) by Candilis, Josic, Woods, and Schiedhelm, where a grid was employed to encourage ad hoc development. While REHAB differs drastically from the Free University in its size and emphasis on orientation within the flow of spaces, both grids promote a sense of order that allows for variety within them.

At the clinic, the outstanding feature remains the layered exterior screen of wood that softens the basic rectilinear form while relating it to the scale and materials of the surrounding residential neighborhood.

Scholars discussing Herzog & de Meuron's work frequently invoke the ideas of Gottfried Semper, the 19th-century architect and theorist, as does Carrie Asman so lucidly in an essay in *Herzog & de Meuron: Natural History* (2002). Semper had famously given textile wall coverings prominence as one of the four elements of architecture. To him the *wand*, or screen, rather than the *mauer*, or massive wall, was key to defining and enclosing space. Here at REHAB, Semper's notion manifests itself dramatically with this wooden weave of horizontal and vertical rods. And where the dematerialization of the wall plane helps deinstitutionalize the clinic, courtyards and decks bring nature literally indoors. The design for the clinic, now in operation for several years, appears quite successful. Let's hope it will be emulated as successfully elsewhere. ■





SECTION–PATIENT'S ROOM



The main stair (above) leads to the patients' bedrooms, arranged around the perimeter of the second floor. Each room (left) is 452 square feet, with wood floors and ceilings, a 7-foot-wide skylight, and access to a wood sundeck.

Dalseth Family Dental Clinic
Apple Valley, Minnesota

2 **ALTUS ARCHITECTURE + DESIGN REINVENTS THE SUBURBAN DENTAL OFFICE, INTEGRATING A LUMINOUS INTERIOR WITH A FIELD OF PRAIRIE GRASS.**

By Bette Hammel

Architect: *ALTUS Architecture + Design—Timothy Alt, AIA, principal; Chad Healy, project designer; Roger Cummelin, AIA, project architect; Tammy Anagaran, AIA, architect; Carl Olson, intern architect*
Clients: *Drs. Stephen and Pascal Dalseth*
Consultants: *Stroh Engineering (structural); Marcus Dental Supply (dental equipment)*
General contractor: *Karkela Construction*

Size: *7,000 square foot*
Cost: *$155 per square foot*
Completion date: *June 2002*

Sources
Face brick: *Endicott Clay Products*
Fiber cement panels: *Hardi Panel*
Stucco: *Stephen Donnelly*
Roofing: *Berridge (steel standing seam); GAF Materials (asphalt shingles)*
Locksets: *Schlage*
Carpet: *Bentley Mills*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

The announcement that "we're going to the dentist today" arouses dread in most families. No wonder. While awaiting the potential screech of the drill, nervous patients are typically sequestered in banal, glaring, or dimly lit waiting rooms amid the constant buzz of dental equipment.

Dr. Stephen Dalseth set out to change all that. His dental practice had been thriving for 30 years in Apple Valley, a Minneapolis suburb. But when his son joined the three-dentist group, he seized the chance to rethink the standard approach.

"Our space didn't reflect our practice's progressive nature and sensitivity to patients," he told architect Tim Alt, AIA, principal of the Minneapolis firm ALTUS Architecture + Design. The Dalseths envisioned a dynamic, joyful, and comfortable place, where kids and adults would want to come. Stephen Dalseth also requested a green environment—literally and figuratively—with naturally luminous interiors. As he puts it, "Sunlight always energizes people."

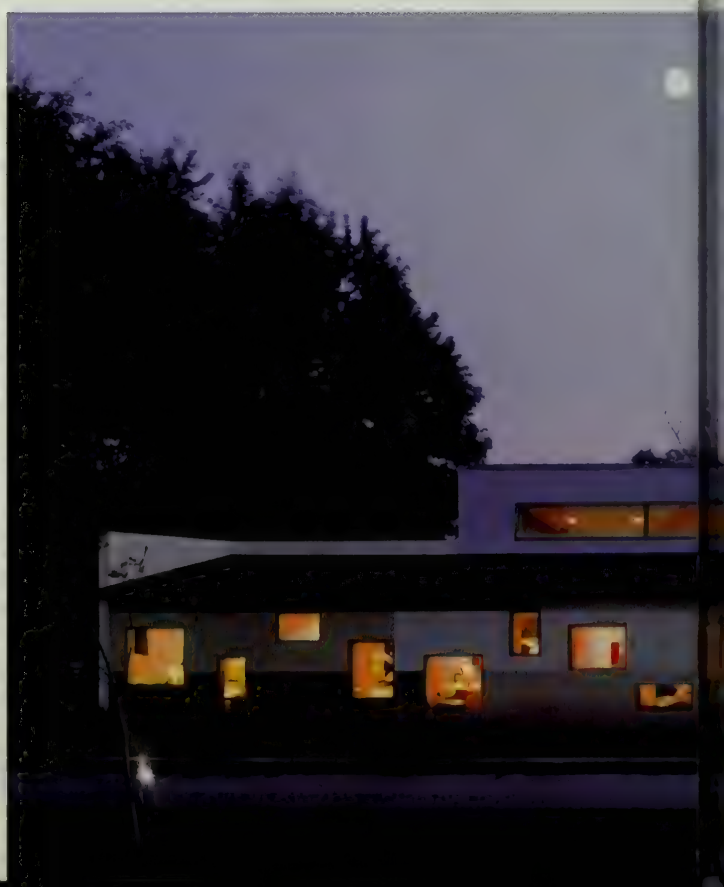
Program

Building on that premise, ALTUS exceeded client expectations by designing a colorful, 7,000-square-foot structure with a glazed waiting room at one end, set in a field of prairie grass. The site and its mature existing trees contrast with the clinic's previous quarters in a bland downtown office building.

ALTUS's 152-foot-long rectangular facility accommodates a program for 12 examination rooms, one dental lab, two X-ray-developing rooms, group offices for staff and the three dentists, a lounge, plus one space each for consultation and patient records. The architects used contrasting colors, forms, lighting, window proportions and placement, and applications of sustainable, low-maintenance materials to distinguish among various functions. Devising the entry was key. "From the beginning," recalls Alt, "we wanted the entrance to be a beacon, a welcoming passageway to a reinvented dental clinic."

Solution

The arrival sequence integrates the building with a seemingly wild land-



Bette Hammel is an architectural journalist based in Wayzata, Minnesota.



A slatted screen of ipe wood borders the path that leads from the parking area to the building's entrance (top and right). Here, a glassy volume at the end of the building contains the waiting room. The ipe screen serves as a freestanding trellis or fence, but becomes a brise-soleil where it wraps the glazed structure. On the building's north face (below), the rhythm of rectangular windows, beneath a clerestory strip, reveals the examination rooms.







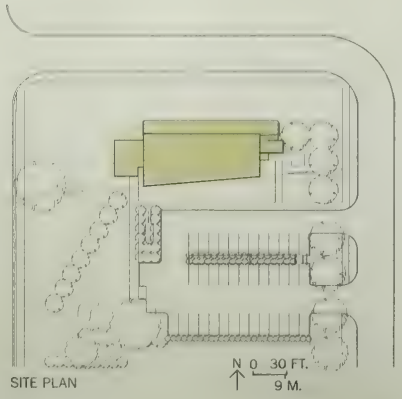
Filled with sunlight, the glassy waiting room (top and opposite, top) rises from a field of prairie grass. The south elevation (right), which faces the parking area, combines brick panels with concrete masonry block.





FLOOR PLAN

1. *Waiting*
2. *Playroom*
3. *Coats*
4. *Reception*
5. *X-ray developing*
6. *Exam room*
7. *Consultation*
8. *Laboratory*
9. *Sterilization*
10. *Storage*
11. *Darkroom*
12. *Staff office*
13. *Janitor*
14. *Waste*
15. *Dentists' office*
16. *Mechanical*
17. *Charts*
18. *Staff lounge*



SITE PLAN

scape. Working with Minneapolis landscape architects Coen + Partners, the design team transformed a 2-acre clearing at a busy intersection by planting prairie grass across the site's northern half. A trail of pavers extends from the parking area to entry, animating movement around the structure. Edged by a tall screen of slatted ipe wood, the path leads visitors into the glazed waiting room, a glass box at the end of the larger rectangular volume. The free-standing screening element serves as a trellis, but becomes a brise-soleil where it partially wraps the glazing.

Beyond the entry, a row of examination rooms face even, low-glare northern light—best suited to visual tasks. A band of clerestory windows also draws north light into the clinic's depths. Over the central space, a gently convex ceiling directs rays onto three colorful sculptural forms beneath it: a consulting room sheathed in deep red; a sterilization lab with a yellow exterior; and a supply room within a gray-green shell. Objectlike, these volumes stop short of the ceiling. A maple and cherry reception desk adjoins the glass-enclosed waiting area, where a yellow playroom eases children's anxieties.

Expressing interior functions on the exterior, the building's north face presents a lively rhythm of examining-room windows, punctuating a collage of yellow, cream, and burnt-red stuccoed panels. On the opposite facade,



six windows of varying sizes perforate a burnished concrete-masonry-block wall embellished with panels of dark purple brick veneer. These south-facing rooms house charts, staff and dentists' offices, and mechanical functions. Above it all, a curved standing-seam roof bows southward.

Vital to the design was Dr. Dalseth's request for a green environment. The metal roof and cladding of stucco, fiber-cement panels, brick, and stone offer lasting materials. The field of prairie grasses—a low-maintenance landscape—not only creates a lush and serene natural setting, but also incorporates a self-perpetuating ecosystem with a pond that filters runoff before it reaches the water table. A geothermal system beneath the prairie grasses heats and cools the building. According to ALTUS, this method has already saved the client considerable money, which will cover the system's initial costs within two years. This energy efficiency reflects the architects' savvy decision making within the constraints of a modest budget of $155 per square foot.

Commentary

Alt credits his client with the courage to reinvent the image of suburban dentistry. In the two years since this building opened, the new-patient roster has doubled, with revenues rising 25 percent. Thanks to ALTUS and an enlightened dentist, a trip to this clinic can actually be relaxing. ■

The seemingly wild field provides a buffer between the waiting area and busy traffic intersection (above). From the dental chair, patients can enjoy views of nature (bottom right). Clerestory-lit, the building's central space contains sculptural forms, including the red-clad consulting room (right).





Yawkey Center for Outpatient Care
Boston, Massachusetts

3

CAMBRIDGE SEVEN AND MICHAEL FIELDMAN BRING ORDER AND AN ENGAGING PUBLIC FACE TO A LARGE CITY HOSPITAL COMPLEX.

By Clifford A. Pearson

Executive architect/urban design: *Cambridge Seven Associates—Charles Redmon, FAIA, design principal; Ron Baker, AIA, Adam Mitchell, AIA, James Puopolo, AIA, Rebecca Barone, Todd Cirillo, David Gifford, Achyut Kantawalla, Yong Joo Kim, Henry Recor, Barbara Reyes, John Sivills, Tom Walsh, David Wiborg, Alison Rowell, Sarah Redmon, Kwesi Arthur, project team*
Planning and design architect: *Michael Fieldman, Architect—Michael Fieldman, FAIA, design principal; Ed Rawlings, AIA, John Adamek, K.C. Cheung, Stefano Giubileo, Satoko Hoshino, Steven Kilian, Viola Rouhani, Jacob Zachariah, project team*
Historic architecture consultant: *Ann Beha Architects*
Fit-out architects: *Perkins + Will and Steffian Bradley Associates*
Client: *Massachusetts General Hospital*
Construction manager: *Walsh Brothers*

Size: *420,000 square feet*
Cost: *$165 million*
Completion date: *October 2004*

Sources
Curtain-wall framing: *Sota*
Aluminum panels: *Architectural Specialty Products*
Brise-soleil: *Ipswich Bay Glass*
Glazing: *Viricon*

For more information on this project, go to Projects at **www.architecturalrecord.com**.

Adding a 440,000-square-foot clinic to an urban site already occupied by several buildings requires a talent for master planning, architecture, and logistics. Making the new facility work for patients and medical staff is no small feat, especially when the building has to attach to a historic structure and sit across the street from a busy transit station. All these constraints could have resulted in a seriously compromised design, but the team of architects working on the Yawkey Center for Outpatient Care at Massachusetts General Hospital (MGH) in Boston used them to emphasize the building's role in establishing connections with its neighbors.

Program

Like many big-city hospitals, MGH had grown piecemeal over the years. Although its core was strong—a handsome 1930s structure called the White Building, designed by Shepley Bulfinch Richardson—it had become an ad hoc collection of facilities, rather than an efficient or attractive health-care campus. It also needed a new ambulatory-care building to bring together various outpatient services scattered throughout the hospital complex.

Solution

In 2000, the hospital invited about 20 architectural firms to compete for the job of designing a master plan that would bring order and





A photo collage shows a rendering of the ambulatory-care center inserted in its dense urban setting (left). An outdoor plaza (above) helps connect the historic Charles Street Jail to the new hospital building.



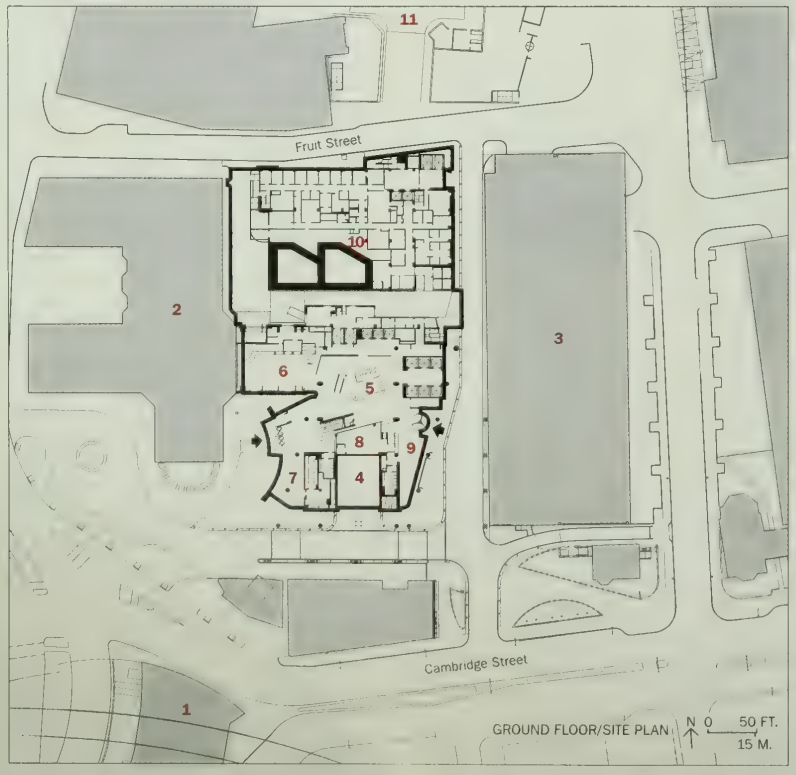
The Yawkey Center faces the Fruit Street Garage (foreground right) and aligns with the White Building (background right).





1. *Transit station*
2. *Old jail/future hotel*
3. *Fruit Street Garage*
4. *Entry to underground garage*
5. *Information*
6. *Café*
7. *Coffee shop*
8. *Gift shop*
9. *Waiting*
10. *Proton Center*
11. *Future addition*
12. *Clinical suite*

Where its site opens up, the building engages its neighbors with a glazed curtain wall (above left). Along narrow Fruit Street, though, the architects clad the building with aluminum panels and strip windows (above).





accommodate new growth. Cambridge Seven Associates and Michael Fieldman, Architect teamed up and won the commission by proposing a master plan that aligns development along a central wedge defined by two axes, each angled about 10 degrees from the center of the White Building. The plan handles growth by tearing down some older buildings and garages at the medical center, and creating underground parking with new buildings above.

The architects positioned the first major component of the master plan, the Yawkey Center, to define the new west axis, aligned with Charles Street near the Charles River. This ambulatory-care center draws the hospital toward Cambridge Street to the south, engaging the campus with the Beacon Hill community and a renovated T station.

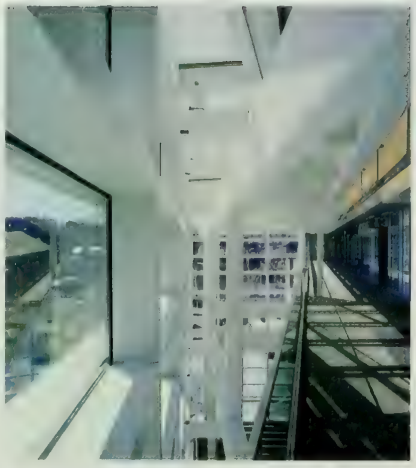
To the north, the Yawkey building literally engulfs the existing Northeast Proton Center, stripping away its exterior shell while retaining its high-tech core. The architects faced a different challenge to the west, where the Yawkey Center connects to the historic Charles Street Jail, an impressive stone structure that Cambridge Seven is now converting into a hotel. While the architects preserved most of the granite jail, they tore down part of its eastern wing, then rebuilt two of its bays as part of the new hospital building.

Future phases will extend the ambulatory center to a new building to the north (across Fruit Street) and then replace an existing garage on Fruit Street with more underground parking and a new meeting center.

Designed with an extensive glass-and-metal curtain wall toward the east, the Yawkey Center presents a Modern face to its neighbors and engages them with its transparent architecture. Aluminum brise-soleils on the upper floors protect the curtain wall from the full impact of the sun, while a generous glass-and-steel canopy covers the vehicular entry and almost touches the Fruit Street garage across the driveway.



A four-story-high atrium occupies one arm of the former Charles Street Jail and flows directly into the lobby of the new building. A café sits on the ground floor, enjoying views out to a plaza.









On the ground floor, the architects emphasized the public realm, designing a spacious lobby and waiting area off the vehicular entry and a coffee shop and café off a curving plaza facing the T station. The plaza also serves as an outdoor room connecting the old jail and the new hospital building.

Inside the rebuilt bays of the jail, Cambridge Seven and Michael Fieldman worked with historic consultant Ann Beha Architects to preserve the old shell while creating a four-story-high space with a café on the first floor, a lounge on the second, and offices above. By pulling the floor plates away from the old facade and creating a multistory space with views out the tall windows, the architects echoed the jail's sectional organization, explains Fieldman.

To bring daylight and views into medical areas, the architects organized clinics and waiting rooms along a single-loaded corridor just inside the building's glazed curtain wall. Clear- and opaque-glass partitions separating clinics and medical offices (designed by Perkins + Will and Steffian Bradley Associates) from the corridor allow daylight to filter deep inside.

Commentary

Corridors often give hospitals their dreary institutional feeling, but the sun-washed ones in the Yawkey Center create a lively setting for medical activities. The building's simple plan and use of daylight also help visitors with wayfinding, while its transparent face provides an attractive gateway to the entire hospital campus. ■

By placing the main corridor along the glazed east facade (middle and top left), the architects could bring daylight deep into the waiting rooms and clinical suites (left) on each floor. A lounge on the second floor (top right) overlooks the atrium in the eastern portion of the former jail building and will lead to the hotel now being constructed in the rest of the old jail.

Water is Precious

Water is the most valuable resource in our world.

Water Conservation is fast becoming a global challenge.

How do we accept the challenge?

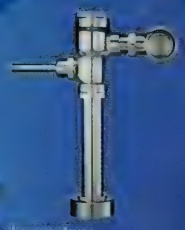
Since 1906, Sloan has provided reliable, cost-effective solutions to delivering water. We believe you share our commitment to water conservation.

Sloan's **Water Conservation Division** and LEED®-applicable products can help you achieve your sustainability objectives.

Let Sloan's **Water Conservation Division** be your partner.

Water Conservation is not just our mission.

It is our promise.



Water-saving manual and electronic Flushometers



Waterfree urinals



Water-saving electronic faucets



Water-saving pressure-assist water closets



Water-saving diminished

SLOAN.

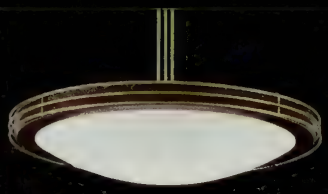
Call 800-9-VALVE-9 (800-982-5839) ext. 5609
www.sloanvalve.com

In China:
Sloan Valve Water Technologies (Suzhou) Co. Ltd., [illegible], China
www.sloan.com.cn

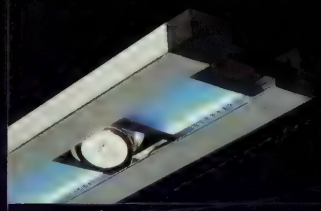
CIRCLE 48 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

COOPER LIGHTING ARCHITECTURAL OFFERINGS

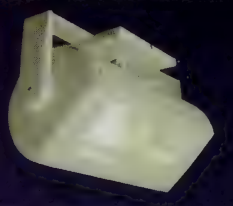
Versatile and distinctive architectural lighting solutions that enrich any environment.
Inquire about the industry's most trend-setting products.
www.cooperlighting.com



Shaper High Performance Pendants



Neo-Ray Scala



Ametrix Roundel



Lumière Coronado 710

D'Amour Center for Cancer Care, Springfield, MA
Lighting Design: Enrique Rojas, IALD
Architect: Steffian Bradley Architects
Photography: Robert Benson Photography

COOPER Lighting

www.cooperlighting.com

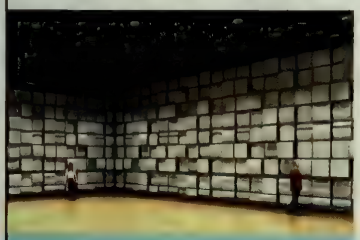
CIRCLE 410 ON READER SERVICE CARD FOR G
TO ARCHITECTURAL CONSTRUCTION PRODUC

Architectural Technology

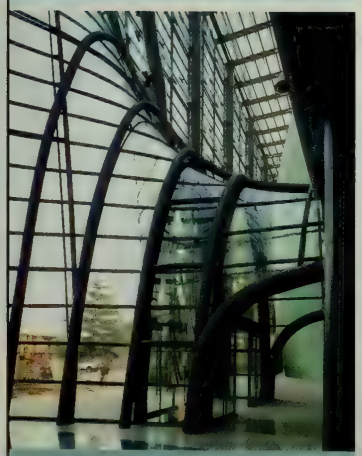
As green-building standards mature, practitioners want to ensure they remain both rigorous and relevant

CONTENTS

135 **Building Science: Taking a critical look at LEED**
144 **Spotlight on systems research**
150 **Zoom In: EMPAC, Troy, New York**
153 **Tech Briefs**
159 **Tech Products**



At RPI, a new arts center features state-of-the-art studio space (150).



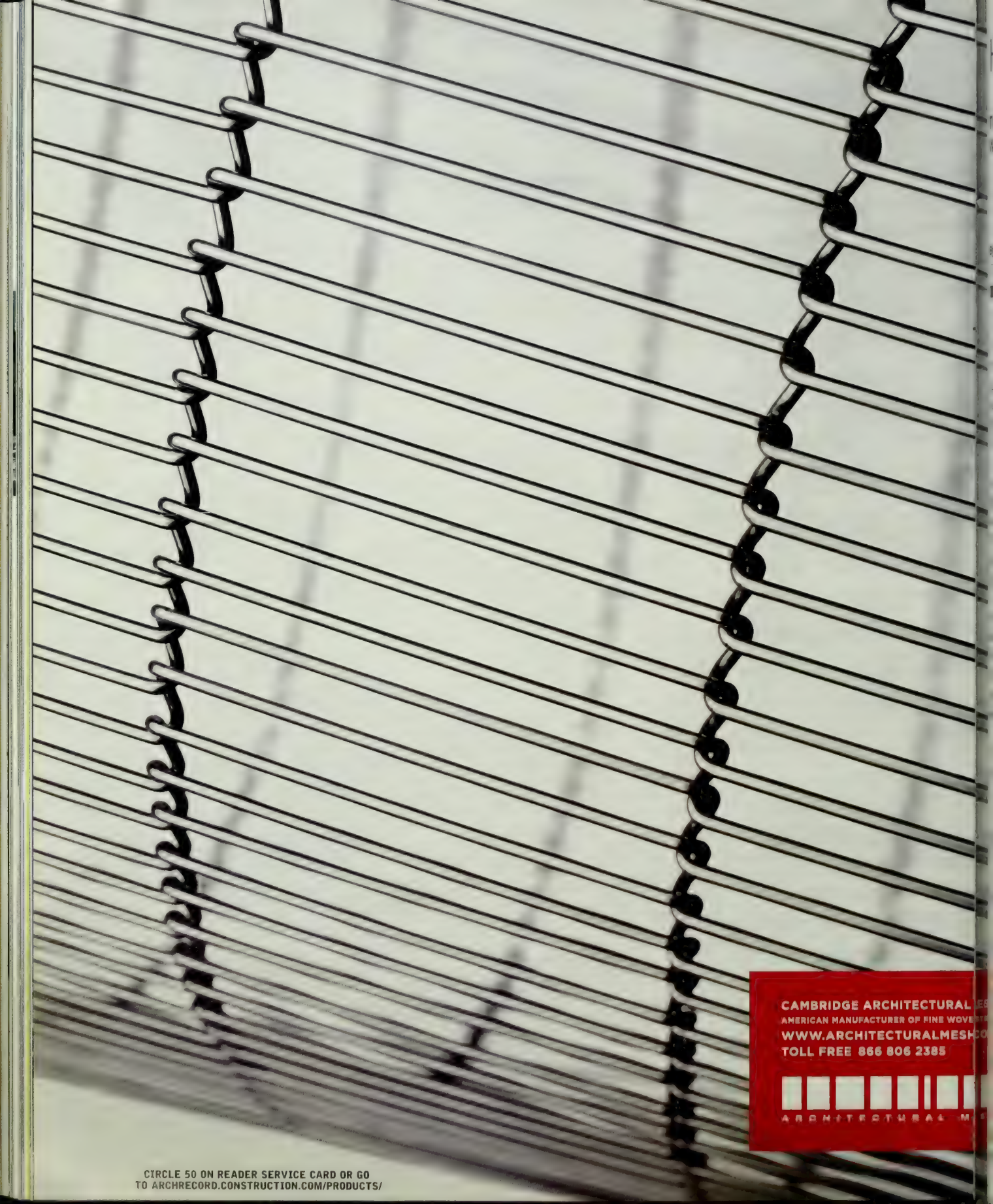
A saddle-curved entry beckons visitors to a Beijing planetarium (154).

Hardly a day goes by that we don't receive a fax or an e-mail announcing a project that's applying for LEED certification. In the five years since the U.S. Green Building Council released its standard for measuring the greenness of buildings, LEED has undoubtedly raised the public profile of sustainable design, with several U.S. cities adopting the standard for public construction, and new versions that are tailored for rating projects that involve existing buildings and commercial interiors. But the standard is not without its limitations—or its critics. In this month's main feature, writer Nancy Solomon takes a closer look at what the AEC community has been saying lately about LEED, and also delves briefly into other programs that are emerging in the green-building standards area. Sustainabilty is also the theme of the second feature this month—a summary of research projects that involve improving the energy efficiency of building systems, a topic under much discussion as oil prices continue to climb.

Speaking of research, we heard that architect Rafael Viñoly is offering fellowship grants of up to $60,000 to individuals who want to study issues and ideas relevant to architectural design and practice. Fellows of the program would have access to his firm's office in New York City, including the use of computers, a fabrication and model shop, and other resources. The firm is also hosting a 14-week series of master classes for professional practice, many taught by Viñoly himself, beginning in September 2005. It is rare for a firm to invest its own resources in this sort of effort for the profession—and we applaud the initiative. Space for both the fellowships and the master classes is limited to 15 people; you've got until July 1 to submit a proposal. For more information, visit the program's Web site at www.rvapr.com. We're looking forward to hearing what comes out of this ambitious undertaking. *Deborah Snoonian, P.E.*



(135).



CIRCLE 50 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

How Is LEED Faring After Five Years in Use?

THE BEST-KNOWN RATING SYSTEM FOR GREEN BUILDINGS IN THE UNITED STATES, LEED STRUGGLES WITH ITS OWN RAPID RISE IN POPULARITY

By Nancy B. Solomon, AIA

There is no question that Leadership in Energy and Environmental Design (LEED), the green-building rating system developed by the U.S. Green Building Council (USGBC), has been a success. After all, its original mission was one of market transformation. "In my professional career, no other tool has been as powerful in encouraging designers and builders to look at the environmental performance of buildings," says Bob Berkebile, FAIA, principal of BNIM Architects in Kansas City, Missouri, founding chairman of AIA Committee on the Environment (COTE), and former board member of USGBC.

Today, LEED has virtually become a household word. More and more projects have been registered, and LEED ratings increasingly find their way into marketing brochures distributed by developers, building owners, architects, and contractors. Accredited professionals proudly add "LEED" to their titles, and most significantly, numerous federal agencies and state and local governments require some form of LEED certification. Green architecture is no longer a fringe phenomenon.

Despite the fact that LEED has been—and remains—a critical tool in making this necessary transformation, it's far from perfect. Recent assessments of LEED from various sources have pointed out some of its more glaring flaws. This doesn't surprise many of its original developers. Referring to that pivotal moment when the decision was made to release a sustainable measurement tool that would address commercial office buildings, Berkebile recalls that the USGBC volunteers "knew that it was clumsy and limited, and many wanted to wait until it could be put on more scientific footing, but more wanted to get something out quickly." Berkebile continues, "What was shocking was that many agencies and cities so quickly embraced it as their tool, not realizing that it was not regional, did not do life-cycle analysis, and was focused on corporate buildings."



The roof of the Moscone Convention Center in San Francisco supports 30,000 square feet of photovoltaic panels (installed by PowerLight Corporation), a technology encouraged by LEED.

Regular RECORD *contributor Nancy B. Solomon, AIA, served for a year as editor of AIA's* Environmental Resource Guide.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ *AIA Continuing Education article. To receive credit, turn to page 142 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue include the following multisponsored section: "Associations: Dynamic Connections for the Profession," page 163.*

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Describe the changes that USGBC has instituted for LEED in the past five years.*
2. *Discuss the criticisms of the LEED rating system.*
3. *Identify issues in LEED scheduled for change.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to **www.architecturalrecord.com**.

The ABCs of LEED

In the early 1990s, many facets of the building sector appeared skeptical—if not outright hostile—about the green movement. The construction industry, like a tanker cruising in one direction, was not in a position to quickly or easily turn 180-degrees. For example, some building-product manufacturers, unprepared for questions regarding the environmental impact of their materials, were fearful of releasing proprietary information. And contractors, accustomed to certain business practices, saw no financial incentives in changing their ways. Although scientific evidence suggested that standard construction processes contributed to environmental degradation, no one was able to clearly quantify which methods were worse or which alternatives were better. The industry was still groping for a widely accepted definition and measurement of green building. Many sought a safe forum within which the different facets could consider the economical, environmental, and social costs and benefits generated by

various design and construction options and could forge a path through the many unknowns to establish a workable, positive action plan.

The USGBC was formed in 1993 as a coalition of a handful of building-related organizations to serve this role. By 1995, staff and volunteers began to develop a digital measuring tool for sustainable buildings. Version 1.0 of LEED for New Construction (LEED-NC) was piloted in 1999, and version 2.0 publicly launched in March 2000. Since then, about 1,900 projects have registered to use LEED-NC, and another 200 have been certified under it.

CERTIFICATION IS BASED ON EVALUATION OF THE TEAM'S INTENT IN IMPROVING THE BUILDING'S PERFORMANCE.

The rating system is divided into six categories. Five address specific environmental concerns—sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality—and one is set aside for innovations that do not fit neatly in the others. The categories are broken down into specific design goals that have the potential to improve a building's environmental performance within that area of focus. Some of these goals are considered prerequisites to any LEED certification. Others are optional. Whether required or optional, each goal is worth one point. Certification is based on the evaluation of the design team's intent in improving the building's performance. For a project to be certified, 26 points must be achieved; 33 points for silver; 39 points for gold; and 52 points for platinum. A total of 69 points is theoretically possible.

Projects register early in the design process and receive tools to assist with documenting project performance. The current fees range from $750 for small projects (less than 75,000 square feet) that are submitted by members to $3,750 for large projects (greater than 300,000 square feet) that are submitted by nonmembers. A separate fee, ranging from $1,500 to $7,500, is charged at the time project documentation is presented for certification review. Thus, the total certification fees run from $2,250 for a member's small project to $11,250 for a nonmember's large project.

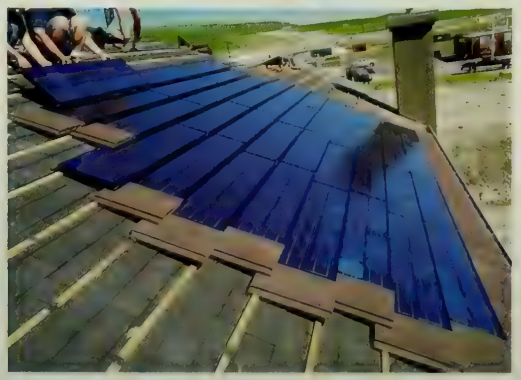
From the onset, USGBC recognized that LEED would have to evolve over time. LEED 2.1 came out in November 2002 to streamline the documentation process. In addition, starting in 1999, USGBC began to address the needs of different building markets by developing more than one LEED product. Spinning off the basic template for new construction, USGBC began to develop other rating systems for existing buildings (EB), commercial interiors (CI), core and shell projects (CS), homes (H), and neighborhood development (ND).

Assessing the assessment tool

Now that LEED has been available in one form or another for some five



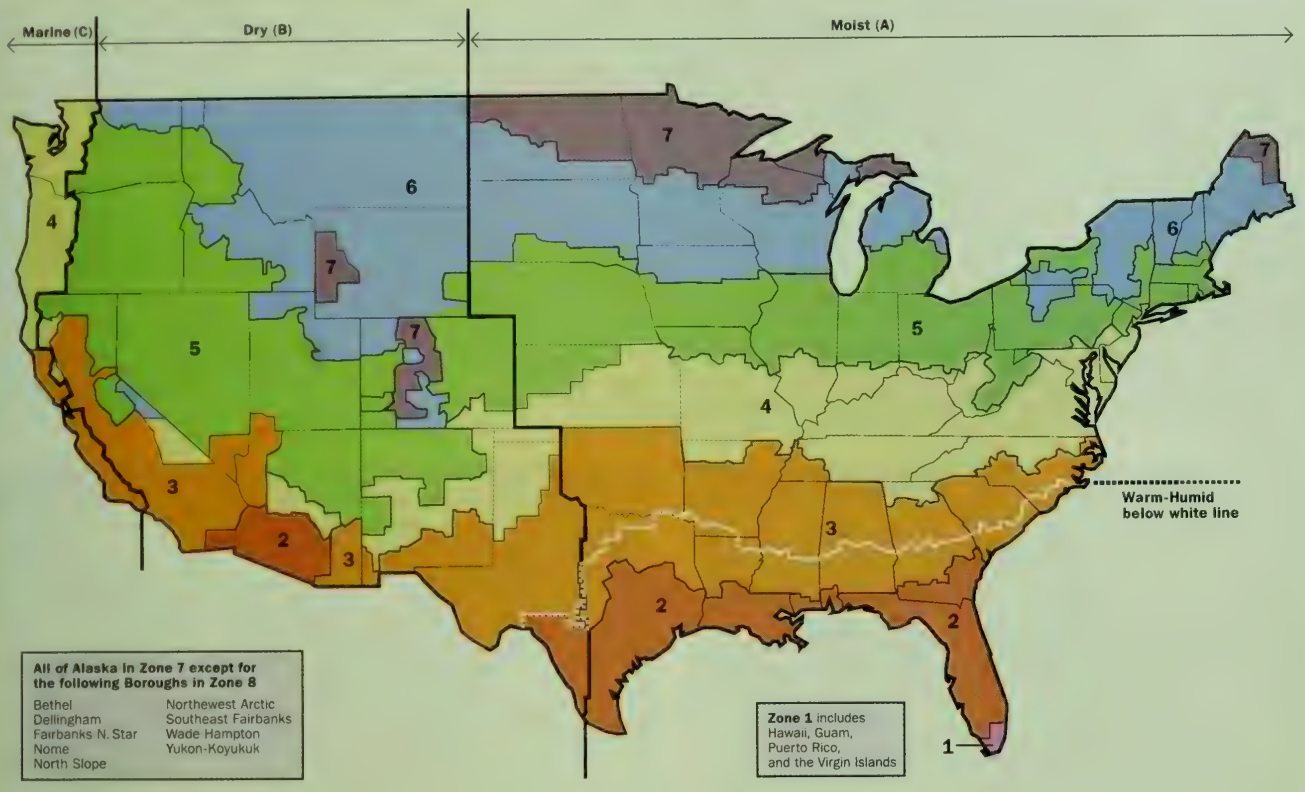




The Montgomery Park Business Center in Baltimore (above) features a 20,000-square-foot green roof. Solar hot-water roof panels (far left) are installed on the Chesapeake Bay Foundation Philip Merrill Environmental Center. Centex Homes has built model residences (near left) in California with photovoltaic roof panels. Governors of Maryland and California have signed executive orders requiring some level of LEED certification for state projects.

PHOTOGRAPHY: KAREN SCHOCK BANTA (TOP RIGHT); STATE ENERGY GROUP (BOTTOM RIGHT); ROBB WILLIAMSON (LEFT)

MAP OF DEPARTMENT OF ENERGY'S PROPOSED CLIMATE ZONES



The new International Energy Conservation Code defines climate zones geographically rather than climatically, reducing their number to eight from 19 and making compliance simpler. Current versions of LEED do not consider regional differences.

SOURCE: U.S. DEPARTMENT OF ENERGY

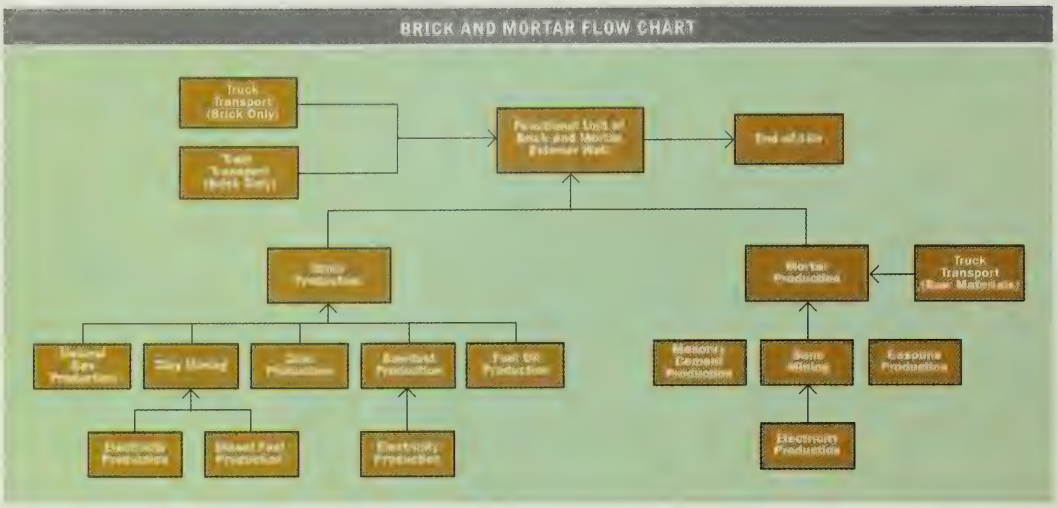
years, it's appropriate that the system has been reviewed externally and internally for various purposes. Among others, Chris Scheuer and Gregory Keoleian of the Center for Sustainable Systems at the University of Michigan evaluated LEED in a report for the National Institute of Standards and Technology titled "Evaluation of LEED Using Life-Cycle Assessment Methods," which was published in September 2002. Lisa Fay Matthiessen and Peter Morris of Davis Langdon analyzed the cost of green projects, including both those that did seek LEED certification and those that did not, and released their findings in a July 2004 document called "Costing Green: A Comprehensive Cost Database and Budgeting Methodology." This year, Auden Schendler, director of environmental affairs at Aspen Skiing Company, and Randy Udall of the Community Office for Resource Efficiency, both in Aspen, Colorado, coauthored a critique of LEED, called "LEED is Broken … Let's Fix It," that reads like a call to arms. And, although more politic in tone, Jay Stein and Rachel Reiss of Platts, a subscription Web division of The McGraw-Hill Companies, in their "Ensuring the Sustainability of Sustainability Design: What Designers Need to Know About LEED" point out inconsistencies and unknowns in the LEED system and suggest ways for designers to work around them.

DESIGN STRATEGIES MUST TAKE INTO ACCOUNT LOCAL CLIMATE, GEOGRAPHY, RESOURCES, WILDLIFE, AND HABITAT.

Two big glitches

In its laudable desire to create a national rating protocol that could be easily understood and applied by all, USGBC developed a simple, universal system in which one goal, or credit, receives one point. From this seemingly reasonable structure, however, comes what appears to be two of the most fundamental criticisms of the current LEED framework: its bioregional insensitivity and its relatively tenuous connection to life-cycle analysis.

In truth, many sustainable design strategies are regional in character. They must take into account local climate, geography, resources, wildlife, and habitat. As Stein and Reiss note, "… water conservation is more of a priority in hot, dry climates, yet the USGBC awards the same number of credits for water conservation in Seattle as in Phoenix … ." One unintended consequence is that less environmentally conscientious design teams may choose the least expensive strategies recognized by LEED to get the respective credits, even though the implementation of those strategies



SOURCE FOR ALL CHARTS: OFFICE OF APPLIED ECONOMICS, NIST

The Building for Environmental and Economic Sustainability (BEES) measures the environmental performance of building products by using life-cycle assessments. The BEES 3.0 model (bottom right) shows how the overall performance score is derived. The flow diagram (left) shows the major elements of brick and mortar production, while the life-cycle cost method is used to measure building performance (bottom left).

may not substantially improve the project's sustainable contribution.

Life-cycle analysis, or LCA, refers to the scientific discipline of measuring the material resources and energy consumed, and the environmental impact created, by a particular product throughout its life. By comparing this data for alternative products, designers could—at least in theory—select the materials and components that cause the least environmental damage. But LEED's one-point-per-credit structure doesn't encourage this more sophisticated analysis. Stein and Reiss continue, "… when designing renovation projects, developers can save more material resources by reusing 75 percent of an existing building's structure and shell … than by incorporating at least 5 percent of salvaged or reused building materials, but both strategies earn one point in the LEED rating."

SOME COMPLAIN ABOUT THE TIME AND PAPERWORK INVOLVED IN DOCUMENTING APPLICABLE STRATEGIES FOR LEED.

Additional concerns

Many accuse LEED of being too bureaucratic. Some complain about the time and paperwork involved in documenting applicable strategies. Others point to USGBC's reliance on just one wood certification program—Forest Stewardship Council—as too narrow-minded. And yet others describe experiences in which LEED certifiers got so bogged down by technical details that they lost sight of the tremendous environmental progress being made right before their eyes by noteworthy design and practice strategies.

The list of complaints and suggestions go on—from frustration with the cost of pursuing certification and a confusing energy-modeling protocol to a proposal that the final evaluation be based on environmental-health indicators (from habitat diversity to water quality) after the building is up and running.

Peer pressure

In addition to external critiques, LEED is facing its first potential competitor—Green Globes, a Web-based sustainable design tool for new commercial construction. First released for the Canadian market several years ago, Green Globes was adapted and brought to the U.S. in 2004 by the Green Building Initiative (www.thegbi.org), which got its start working with the National Association of Home Builders to promote the association's Model Green Home Building Guidelines. In a March 2005 article in *Environmental Building News*, Nadav Malin wrote that "GBI is supported by the Wood Promotion Network and a number of other industry groups that object to some provisions in LEED … ."





Whether it's work or home, indoors or out,

RESIDENTIAL

Marazzi Tile offers the perfect product

for any installation. Specify diverse lines of

through-body porcelain complete with

a wide array of colors, sizes, trims and surface

COMMERCIAL

treatments. Quality, durability and

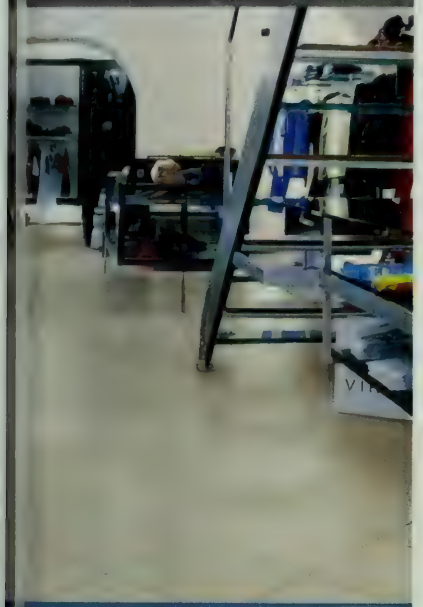
technologically-advanced products make

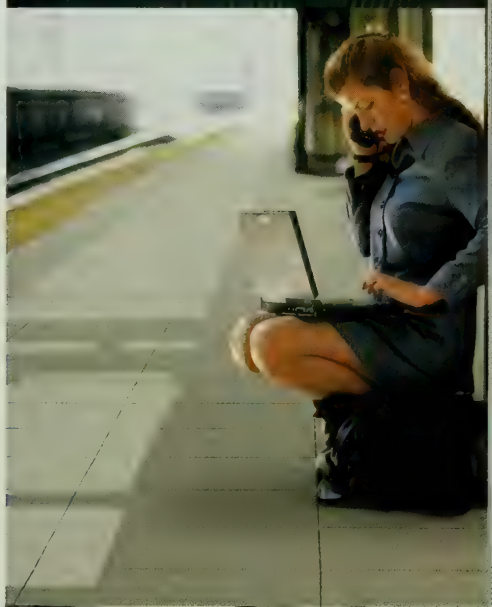
Marazzi Tile, the ideal choice for

your next project. We've covered every niche,

EXTERIOR

so you can cover every area.









TECHNICAL ANSWER HOTLINE
(877) TEC-TECH (832-8324)

For more information call your local American Marazzi Tile Distributor or call Customer Service at [972]226-0110 ext. 3166 or email: contact@marazzitile.com

MARAZZI USA

MARAZZI TECNICA

Although Green Globes offers some features not currently in LEED—including its online platform and links to energy-modeling and LCA software tools—it still lacks many of the characteristics that give LEED its strength. According to Vivian Manasc of Manasc Isaac Architects in Edmonton, Alberta, a founding member of Canada's Green Building Council, "No other rating system is as broadly based in the marketplace as is LEED. With USGBC's 4,000-plus members getting to vote on what is in the rating system, LEED has large public input. It's easy to write an elegant system as long as you don't have to deal with the messiness of the marketplace."

USGBC plans on the horizon

To a great extent, LEED is suffering from its own success. Because there was such a great need for environmental guidance, people latched onto it so quickly—and demanded so many versions for different building types—that USGBC has yet to have enough time and resources to fully refine and add depth to the original model. Nonetheless, says Peter Templeton, USGBC director of LEED and international programs, "We are very much listening to the feedback."

Templeton believes some concerns will be addressed in LEED 2.2, which is currently under development for tentative release in the fall. For example, this version will reference the 2004 edition of ASHRAE 90.1, thereby avoiding the vexing energy-modeling problem created by the 1999 version of the standard. It will also include an online tool that promises to be more user-friendly and cut down on the paperwork. Templeton expects other changes in the documentation and review process to make it easier for applicants to cope with the administrative process. And he anticipates some refinement in the credits themselves.

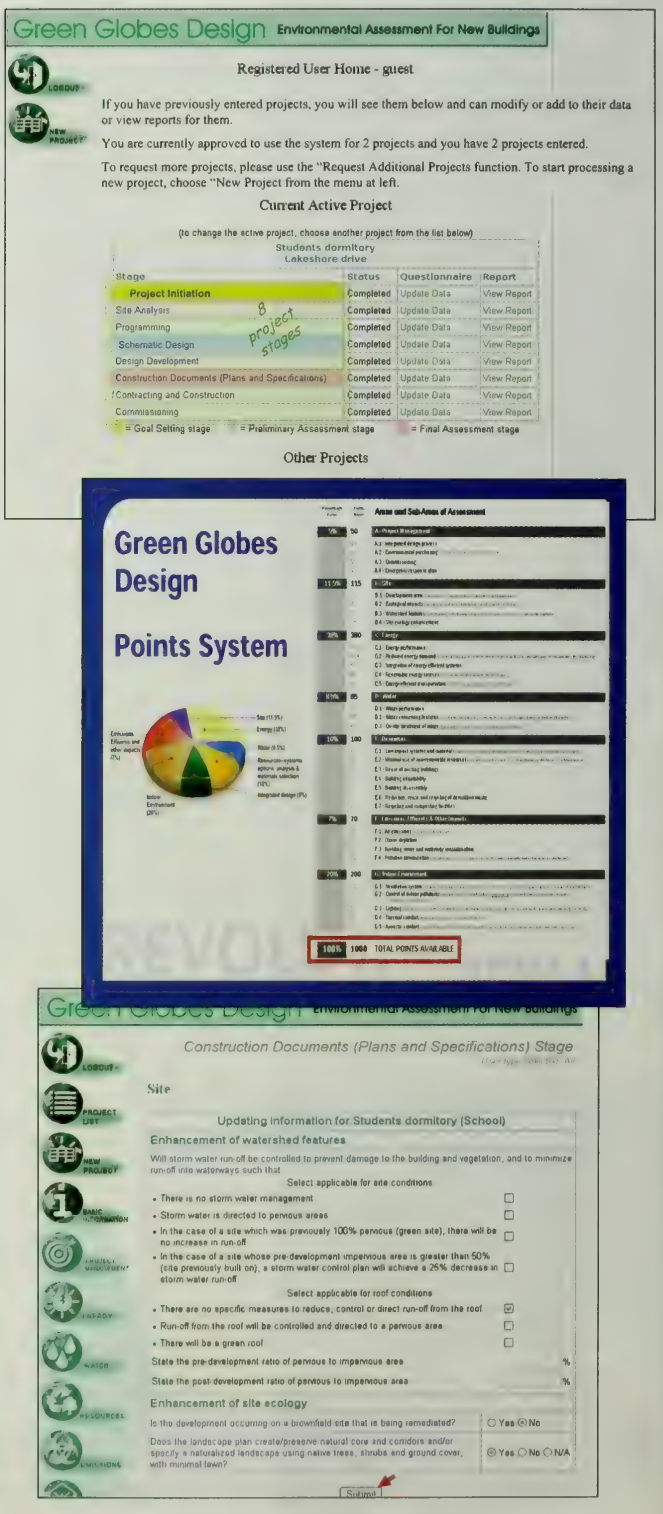
Larger, more structural plans are being considered down the road for LEED version 3.0, which Nigel Howard, vice president of LEED

"WE DON'T ENVISION MAKING LEED 3.0 MORE STRINGENT—BUT WE WANT TO MAKE IT MUCH SMARTER."

and international programs at USGBC, believes will be a template toward which all the LEED products can gradually progress according to their respective timetables. Says Howard, "We don't envision making LEED 3.0 more stringent—but we want to make it much smarter."

As an example, Howard suggests an ecological index for sustainable sites. In this scenario, there could be a greater range of possible points, depending on the potential impact of a project on its local habitat. A project built on a derelict site with no species of flora and fauna will show a net improvement—and therefore earn more points—if part of the area is landscaped. And a project built on woodland could be penalized to a greater extent than one built on farmland, because the original woodland would have had far more ecological diversity to start with than the farmland, and therefore the construction would have a greater negative effect on site conditions.

Howard suggests that LEED will be increasingly underpinned by LCA-type thinking, although he is quick to point out that some important sustainable design issues are not typically addressed by LCA. "Traditional LCA has focused on materials and products," he explains. It tends to look at global impact (such as loss of natural resources and toxic emissions) rather than local impact (such as storm-water management and light pollution) or interior consequences (such as thermal comfort and views of nature). Searching for the right mix, USGBC recently established a committee to consider the role of LCA within LEED and the appropriate



SOURCE: NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

A Web-based performance tool from Canada, Green Globes is being introduced to the U.S. market as an alternative to the LEED Rating System. Green Globes consists of a series of questionnaires, customized by project phase and the role of the user in the design team. A total of eight design phases are supported.


Introducing a synthetic shake so lifelike, it fools even the toughest critics.
With real-life colors, textures and multiple-width shingles, it's only natural to mistake DaVinci Shake for rough-hewn cedar.
And with so many exceptional performance advantages, it's only logical to specify DaVinci over wood shake or other synthetics.
In fact, DaVinci synthetic shake shingles hold a Class A fire rating, Class 4 impact/hail rating and high wind rating, as well as resistance to freeze/thaw, algae, fungus and insects – all backed by our 50-year warranty.
Clearly, this is the smart roofing choice.... even if no one notices.
DaVinci Roofscapes
A Renaissance in Roofing
www.davinciroofscapes.com
CIRCLE 52 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

methodology, data, and tools that would be needed to make it a reality.

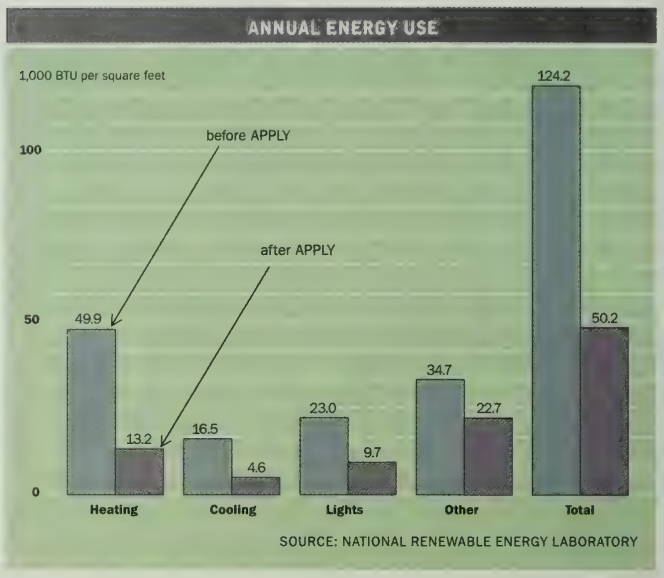
Last, but not least, Howard expects that LEED 3.0 will establish bioregionally weighted credits in order to reward those strategies that offer environmental benefits appropriate to a specific locale.

The future of green

It's hard to know if USGBC's anticipated changes will satisfy all the critics, or come quickly enough for them. But those who have long been at the forefront of this movement take a broad view of the situation.

LEED 3.0 WILL ESTABLISH BIOREGIONALLY WEIGHTED CREDITS IN ORDER TO REWARD THOSE STRATEGIES APPROPRIATE TO A SPECIFIC LOCALE.

Practitioners like Bill Reed, AIA, vice president of integrative design for Natural Logic in Arlington, Massachusetts, see LEED as part of a larger, more comprehensive, and more far-reaching process. When potential clients call him about doing a LEED project, he tells them, "We don't just do LEED. We work at the restorative level." The fact that people are calling and asking the questions is demonstration enough that LEED has been a resounding success. "I think LEED is serving its intended purpose," says Reed, "but it is not the *ultimate* purpose." ■



ENERGY-10, a PC-based design tool, helps architects quickly identify the most cost-effective, energy-saving measures for small buildings. APPLY is a special feature that provides a quick way to determine the combined effect of a group of strategies.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "How Is LEED Faring After Five Years in Use?" using the learning objectives provided.
- Complete the questions below, then fill in your answers (page 224).
- Fill out and submit the AIA/CES education reporting form (page 224) or download the form at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. The original mission of the United States Green Building Council (USGBC) was which?
- **a.** to increase availability of environmentally friendly materials
- **b.** to increase use of certified professionals
- **c.** to transform the environmentally friendly materials market
- **d.** to transform the building and design market

2. The LEED rating system addresses what type of concerns?
- **a.** innovative
- **b.** environmental
- **c.** measurement
- **d.** evolutionary

3. The letters "NC" after the letters "LEED" stand for what?
- **a.** noncommittal
- **b.** noncommercial
- **c.** new construction
- **d.** new commercial

4. LEED is criticized for not giving enough distinction in which area?
- **a.** life-cycle analysis based on environmental impact
- **b.** atmospheric pollutants based on air movement
- **c.** sustainable design strategies based on regional climate
- **d.** a and c

5. LEED certification is based on which?
- **a.** the design team's intent in improving the building
- **b.** the actual performance of the completed building
- **c.** the number of LEED-certified professionals involved with the architectural design of the building
- **d.** the amount of environmental damage it prevents

6. A sustainable design tool in direct competition with LEED is which of the following?
- **a.** green acres
- **b.** green globes
- **c.** green peace
- **d.** green guidelines

7. In the early 1990s, the construction industry was skeptical of the green movement for all of the following reasons except which?
- **a.** fear of releasing proprietary information
- **b.** there already was a positive action plan in place
- **c.** lack of quantifiable evidence as to which construction methods were the worst
- **d.** a system of professional training and certification

8. Version 2.2 of LEED, scheduled for release in fall 2005, will address all of the following concerns except which?
- **a.** stringency
- **b.** online tools
- **c.** energy-modeling problems
- **d.** documentation process

9. The letters "EB" after the letters "LEED" stand for which?
- **a.** environmental building
- **b.** energy building
- **c.** existing building
- **d.** efficient building

10. The Green Building Initiative got its start working with which association?
- **a.** Energy and Environment Canada
- **b.** Building Owners and Managers Association of Canada
- **c.** National Association of Home Builders
- **d.** Canada's Green Building Council



You've always had to custom-design connectors for exposed residential and commercial wood framing, then have them fabricated and finished. Now you can simply specify them. The new **Architectural Products Group** from Simpson Strong-Tie® offers a wide range of prefinished connectors that combine load-rated structural integrity with decorative architectural detailing. To see the full line visit our Web site, or call 866.860.9011 to learn more.

SIMPSON
Strong-Tie
™

www.ExposedConnectors.com/Details10

CIRCLE 53 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Spotlight on Systems Research

FOUR UNIVERSITIES STRIVE TO IMPROVE THE WAY LIGHTING SYSTEMS, SOLAR-HARVESTING TECHNOLOGIES, AND HVAC WORK

Behind every technological breakthrough that grabs headlines are scores of smaller-scale studies aimed at improving the way existing products and systems work. Often, the innovations in product or system design that result from such studies are difficult to envision: Who could have guessed that the chunky blocks of plastic that passed for mobile phones 15 years ago would evolve into the multifunctional, slim-as-a-credit-card fashion accessories they are today? In this feature—really a series of four featurettes—we highlight research projects in energy efficiency that point the way toward substantial improvements in the way buildings use (or harvest) power. How about thin, flexible solar cells that can be ordered by the roll, like paper? Or using your laptop to dim the lights and turn off the air-conditioning in your office when you step out at lunchtime? The science behind these scenarios is there, even if all the technological details and cost issues haven't been resolved yet. As energy prices remain uncertain, it's likely that owners will have more incentives in the future to employ strategies that curtail energy usage, whether for retrofits or new construction. Imagining what form those solutions might take—as these researchers are doing—is half the fun. *Deborah Snoonian, P.E.*

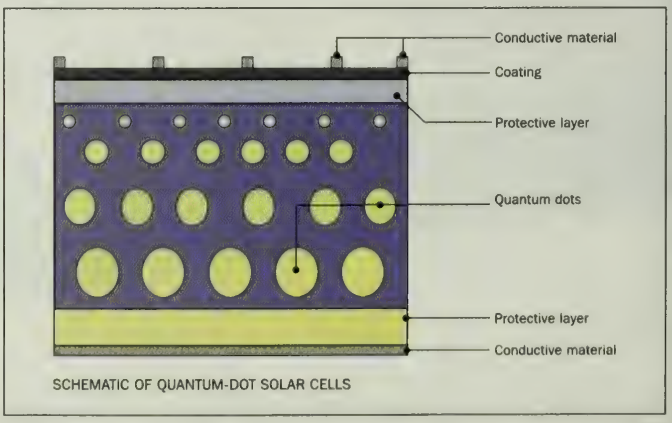
Tapping solar radiation's unseen benefits

Most designers think of sunlight as a destructive force when it comes to surface treatments. They look for UV-stable paints and coatings, and calculate life-cycle costs with the expectation of regularly replacing exposed surfaces. But recent advances in materials science point to coverings—even paints and fabrics—that double as solar cells. Instead of worrying about the deleterious effects of the sun, designers could look forward to using a variety of building materials that have embedded energy-producing capacity.

Researchers at the University of Toronto, in Canada, have expanded the range of solar radiation that such materials can harvest, tapping infrared rays as well as the visible spectrum of light (current solar technology works in the visible spectrum only). This could boost the efficiency of new photovoltaic materials and make them more affordable; it also opens the way for cheap infrared cameras, which could figure in building-security systems.

The researchers' infrared-active colloidal "quantum dots" are made up of lead sulfur nanocrystals and semiconducting plastic. By changing the size of the nanocrystals, the researchers can "tune" the quantum dots to absorb wavelengths from 800 to 2,000 nanometers.

Within five years or so, architects and builders might be able to specify rolls of thin, lightweight, and flexible plastic solar sheeting, made by spraying a solvent containing the nanocrystals onto a thin, flexible substrate within a controlled manufacturing environment.



This diagram shows the design of a flexible solar cell containing a layer of "quantum dots" that harvest sunlight, pioneered by the University of Toronto.

Ted Smalley Bowen is a Boston-based freelancer who writes frequently for RECORD *about technology. Contact him at ted_bowen@hotmail.com.*

Peter Criscione, a research associate at Platts, a division of The McGraw-Hill Companies, in Boulder, Colorado, writes about building technologies, including weatherization, HVAC, and systems for natural ventilation and lighting.





Traditional silicon-based solar panels (top) are often derided for being clunky and expensive. Researchers at Georgia Tech are making organic solar cells that are thin and flexible (above).

Manufacturers might also choose to coat glass or metal surfaces with the solvent, according to lead researcher Ted Sargent, a University of Toronto professor of electrical and computer engineering. Applying the solvent like paint to such materials in the field won't work, says Sargent, because the process needs to be carried out in a controlled, clean environment to be successful.

Lightweight and flexible solar cells would do away with many of the limitations of current silicon-based PV cells, which are heavy, breakable, bulky, and relatively expensive to install. The quantum dots could also be used to make thermal photovoltaic cells, tapping infrared radiation from fuel-fired sources, and for medical diagnostics, using infrared light to screen for cancer, according to the researchers.

The ability to harness infrared radiation could make solar energy more practical in more geographic areas, "assuming there's some total power-production rate threshold that has to be met before the approach becomes economical in a given area," Sargent said. "There is a mild advantage in that some infrared light makes it better through clouds, but the main point is that harvesting infrared as well as the visible wavelengths results in more power harvested."

The quantum dots represent an early stage in the evolution toward commercially available solar cells. But their internal quantum efficiency—the amount of photons absorbed that actually reach the electrical circuit and are turned into usable energy—is just 3 percent, compared to 90 percent for most PV cells now on the market. The researchers are working on increasing this number, along with the quantum dots' absorption of external light and their external power efficiency, or the ability to harvest the sun's power efficiently over the entire spectrum, absorbing more light at multiple wavelengths and ensuring that the efficiencies are additive, Sargent said.

Researchers are also addressing the environmental trade-offs in making solar cells, a process that's energy-intensive and involves hazardous chemicals. The lead sulfide nanoparticles in the Toronto study "need to be encapsulated, and an end-of-life strategy is needed, such as recycling of the materials," Sargent said. He noted that the lead sulfide is "a showcase for the technology. The approach illustrates the value of infrared harvesting cheaply and flexibly. Once we or others develop even more innocuous materials that do the same thing, they will be adopted."

Creating a process for making any material a solar collector by applying quantum dots is a step in the right direction, said Alexis Karolides, an architect and green-building consultant with the Rocky Mountain Institute. "Instead of asking how much can we increase the efficiency of current photovoltaic technology, we need to ask what's possible," she said.

Down the road, embedded solar cells and solar sheeting will need to be integrated with building control systems and power storage technologies like hydrogen fuel cells, according to Sargent. "Presumably, the days when the sun is shining don't correspond identically with your power needs—so you might think of looking at power harvesting and storage problems together, in an integrated fashion." *Ted Smalley Bowen*

Going solar could mean going organic

Despite their advantages, there are many reasons to look for alternatives to existing silicon-based photovoltaic (PV) cells. Heavy, bulky, brittle, and aesthetically compromised, the older designs require clean-room manufacturing facilities, and are made using some less-than-clean materials and processes. Transportation and installation can also be expensive, resulting in higher capital costs.

Thin-film solar cells made of amorphous silicon and other materials address some of the drawbacks of current PV cells, including weight and flexibility—but some of these newer technologies raise environmental and safety questions of their own. More promising, but earlier in development, are organic solar cells, which have the potential to be relatively cheap, easier and cleaner to produce, and more versatile than existing solar technology.

Researchers at the Georgia Institute of Technology have developed a lightweight, flexible, organic photovoltaic cell using pentacene, a polycrystalline organic semiconductor, and the carbon molecule C60. Pentacene is often used in research on transistors, and C60 is in the family of carbon molecules commonly referred to as "buckyballs," named for their resemblance to Buckminster Fuller's designs.

The Georgia Tech organic solar cell consists of a glass plate, layers of indium oxide, pentacene, C60, and bathocuproine, and an aluminum electrode. According to lead researcher Bernard Kippelen, a professor of electrical and computer engineering at the university, it can be produced inexpensively and poses no environmental problems throughout its lifecycle.

For designers and builders, the cell's benefits would include lower transportation costs and easier handling and installation, according to Kippelen. Layered on substrates as thin as a few microns, the cells would conform easily to most roof and wall shapes.

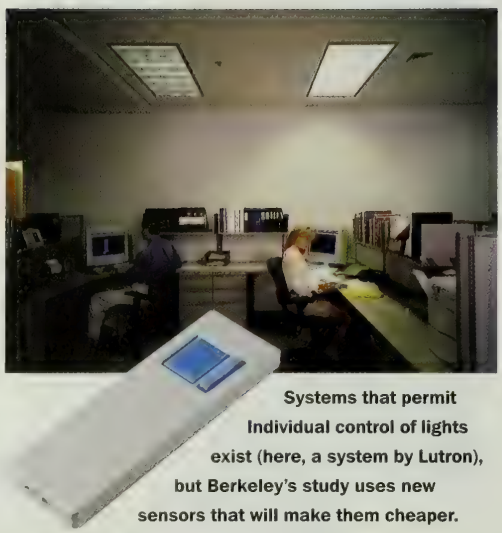
Organic semiconductors, however, are sensitive to moisture and oxygen, and a highly flexible plastic substrate will be needed to provide a sufficient barrier, he added. But while durability is a question mark—they're unlikely to match the 20-to-30-year life span of silicon-based PV cells—the light weight and low cost of the cells would make frequent replacement feasible. "If you just have to peel them off and put new ones on, it could make sense to change the cells as often as every two years, especially if you can make them by the mile, printing roll to roll," Kippelin said.

The researchers' cell has a power conversion efficiency of 3.6 percent, slightly better than the 3.5 percent achieved by most existing

organic cells. They expect to raise that to 5 percent soon, said Kippelen, who added that 10 percent efficiency can be achieved within the next few years. Typical silicon PV cells are about 10 to 15 percent efficient, with some high-end cells achieving closer to 30 percent efficiency. Kippelen stressed that a lot of research stands between this early work on organic cells and their widespread use. "Organic materials for semiconducting have only been around for about 10 years," he said. "The science of these materials is not as advanced as for silicon. It's difficult to predict what the upper efficiencies are going to be."

Small versions of the Georgia Tech researchers' cell—on the order of a square centimeter—could provide power to distributed building sensors or radio frequency identification (RFID) tags within a couple of years. Larger solar panels or rolls of sheeting might be 5 to 10 years away, according to Keppelen.

Environmentally, making organic PV cells poses no significant problems compared to some of the more advanced thin-film solar cells that use harsh chemicals containing cadmium, copper, and arsenic, said Keppelen. "During the manufacture of these cells, people are exposed to nasty chemicals and the process generates toxic waste," he said. "The materials we're using are carbon-based and fairly harmless. Photovoltaic technology should be environmentally friendly," he said. *T.S.B.*



Systems that permit individual control of lights exist (here, a system by Lutron), but Berkeley's study uses new sensors that will make them cheaper.

Researchers are developing new types of solar cells, including those made from organic chemicals and others using "quantum dots," which harvest more sunlight than today's cells.

In lighting, a little intelligence goes a long way

Up to half the electricity used in commercial buildings is consumed by lighting, but control schemes that match lighting use to actual demand can significantly cut that figure. A wireless lighting control system under development at the University of California at Berkeley puts sensors and switches where the action is, on the theory that letting users, building managers, and even utility companies control the lights makes for greater efficiency.

The Berkeley researchers have assembled a prototype system of programmable wireless switches, each of which can control many individual light fixtures. The scheme uses wireless sensors developed at Berkeley that together form a "mesh network" of distributed switches. The fixtures controlled by such a network can be operated manually or automatically, in response to conditions in the immediate surroundings, predetermined schedules, or triggers like signals from utility companies. The scheme doesn't rely on a single existing control protocol, such as the Digital Addressable Lighting Interface (DALI) or Building Automation Control network (BACnet), but is intended to be compatible with existing and new lighting equipment, according to the researchers.

In spring 2004, a test of the Berkeley system in which users were given control of the lighting in their workspaces yielded a 40 percent drop in lighting energy use. The pilot installation was a small office with eight workstations and eight fixtures controlled by a pair of switches. "Our starting point is providing local control to occupants," said Charlie Huizenga, a Berkeley research specialist and lecturer.

The test results highlight the inefficiencies of inflexible central control schemes for lighting, especially for open-plan offices. "One person near a window kept his light off because his space was nicely daylit. Another person kept the lights off when using her computer, but turned them on when reading and doing other paper-based tasks. Another person worked half-time, and was able to turn the light on and off as he came and went," Huizenga said. A similar but larger-scale test program, involving roughly 40 controlled lights, is slated for this summer.

Because it doesn't require rewiring, the low-cost wireless system developed for this study makes it more feasible to retrofit existing buildings with the technology. And the mesh network also makes it easier to provide precise lighting control in new buildings, says Huizenga. Drawing on sensor research conducted at Berkeley, the control scheme taps a variety of power sources. Where relay devices are part of light fixtures, they can draw regular A/C power, but remote switches and motion sensors can run on batteries. Huizenga said, "We are looking at powering them using solar cells, or scavenged vibrational energy." Other researchers have developed push-button switches powered by piezoelectric elements (typically crystals that produce a voltage when they're under compression or tension, or that cause compression or expansion when a voltage is applied).

Controlling the disparate parts of such schemes—by integrating motion sensing, daylight sensing, remote switches, and central switches—is a complex and expensive undertaking, which is why so few buildings use advanced lighting-control systems. But Berkeley researchers believe electricity prices will rise in the next several years, creating an incentive to owners and operators to adopt such measures to slash costs. The cost of mesh networks like the one studied here will also likely drop as the technologies are refined. Unlike earlier systems, the devices in Berkeley's scheme can be installed in a matter of minutes, Huizenga noted. "Maintenance is also an important issue for affordability—the controllers will need to last 15 to 20 years, at least as long as a ballast," he said. Components like those used in the Berkeley study will be on the market within a year or so, he predicts.

The study's results are "very encouraging, and say a lot about how much commercial space is overlit in the U.S. and perhaps elsewhere," said Stephen Conners, director of MIT's analysis group for regional electricity alternatives. Ideally, he added, a wireless system's



Hop on over to our pad for a colorful new palette filled with the latest laminates from Nevamar. Available in both High Pressure Laminates and LamMates™ TFM Panels. Six new exotic wood-grains complete the most unusual and exciting collection anywhere. While six expressive new patterns will jumpstart dozens of innovative design ideas. Of course, our High Pressure Laminate is protected by the exclusive Armored Protection™ Surface for long, beautiful life. So if you really want to make a splash, take the leap to Nevamar. This pond is different.

www.nevamar.com • 800-638-4380

NEVAMAR®
DECORATIVE SURFACES

© 2005 Nevamar Company, LLC.
All Rights Reserved.

CIRCLE 54 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

interface will allow lights to be controlled individually or in groups—but does that mean that pranksters could hijack and change your lights, à la television's *The Office*? Typical security measures like password-protection systems would eliminate this concern, Conners says. *T.S.B.*

New study may boost an old energy-saving technique for HVAC

In many buildings across the U.S., outdoor air is pulled in throughout the day at rates designed to satisfy ventilation requirements for maximum-occupancy conditions, even during times when there are few people in the building (think schools at night or restaurants between lunch and dinner). But a recent study conducted at Purdue University in Indiana has given a shot in the arm to an old strategy for managing energy waste.

For more than a decade, waste from HVAC systems that condition spaces with variable occupancy has been addressed through demand-controlled ventilation (DCV), a strategy that links the amount of outside air drawn in for ventilation to the actual occupancy of the building at any given time, via a network of sensors that use airborne carbon dioxide concentration as a proxy for occupancy levels. DCV has been shown to produce annual energy savings of up to $1 per square foot. Up until now, the high expense and frequent maintenance required for DCV equipment limited the application of this strategy.

But the technology has improved lately. A decade ago, sensors used in DCV systems ranged in cost from $500 to $800 each; now many newer devices cost $200 or less. In addition, some of them remain accurate for 10 to 15 years, substantially reducing the cost of the yearly calibrations that were required for older sensors. Also, many rooftop air conditioners, frequently used in commercial and institutional buildings, come equipped to accommodate sensor inputs, which reduces the amount of labor needed to implement DCV.

The Purdue study, conducted in 2003 and 2004, highlights these recent improvements in DCV technology and points out new opportunities for energy savings. Jim Braun, professor of mechanical engineering at Purdue University, and his colleague Kevin Mercer, modeled four types of buildings—a restaurant, a retail store, a school, and an office—in two cities in California and three cities outside the state (see table, above). The cities were selected to represent a range of climates for the study, and the modeled buildings varied in size from 5,250 square feet for the restaurant to 80,000 square feet for the retail store. The study compared traditionally operated HVAC systems to those using DCV.

The restaurants and retail stores showed the most potential for savings with DCV, with savings estimated at around 50 percent of the total energy operating cost for HVAC in some cities. Across all the cities and buildings, payback periods ranged from 0.2 to 6.8 years, although 16 of the 20 modeled scenarios yielded a payback of fewer than two years, and 12 yielded a payback of one year or less (see table). The modeling used more conservative numbers for design occupancy than those set forth in the relevant ASHRAE standard for all but office buildings—so it's likely that payback periods would be even shorter than what the study predicts.

PURDUE STUDY: MODELING OF DCV IMPLEMENTATION

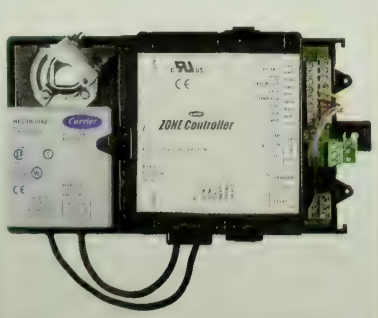
TEST LOCATION	PAYBACK PERIOD (YEARS) OFFICE	RESTAURANT	RETAIL STORE	SCHOOL
OAKLAND, CALIFORNIA	6.8	2.1	1.0	4.0
EL CENTRO, CALIFORNIA	1.9	0.6	0.3	0.9
PHOENIX, ARIZONA	3.4	0.9	0.6	1.5
CHARLESTON, SOUTH CAROLINA	1.1	0.7	0.4	0.9
FARGO, NORTH DAKOTA	1.5	0.3	0.2	0.5

SOURCE: PLATTS/ADAPTED FROM JIM BRAUN, ET AL

Improvements and price drops in the technologies used for demand-controlled ventilation (DCV) make the strategy more feasible for a wide variety of building types.

Along with improvements in the DCV hardware itself, new online software tools, available through the Web sites of HVAC manufacturers, make it easier for design teams to determine where DCV can be used. The tools include Carrier's "Hourly Analysis Program" (www.carrier.com), Honeywell's "Savings Estimator" (www.honeywell.com), and AirTest's "CO_2 Ventilation Control and Energy Analysis" (www.airtest.com). Each allows users to enter information about a project, such as building type, size, and location. The software takes this information and provides users an analysis of the potential cost-effectiveness of a DCV system—which helps reduce the risk and uncertainty of moving forward with this strategy.

"Our hope is that this research will increase the usage of this effective energy-saving strategy," said Jim Braun. His hopes have already been realized: Two utility companies, in California and Connecticut, are now using the Purdue study to build programs that will help their customers identify opportunities to implement DCV. In the not-too-distant future, all HVAC systems may be smart enough to know when a building's empty enough to call it quits. *Peter Criscione*





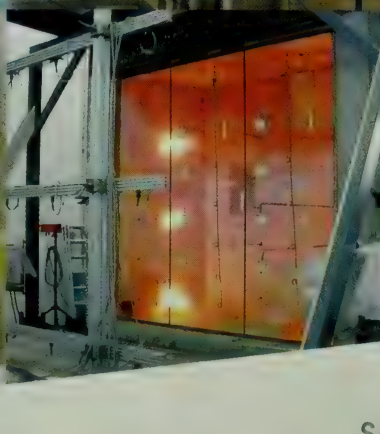
DCV uses carbon dioxide monitors and special controls to estimate occupancy and adjust air intake. A study at Purdue concludes that DCV would be financially feasible for several types of buildings.



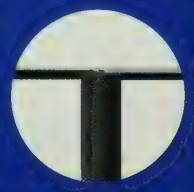








Discover a clear vision for fire-rated glass design.



For fire-rated safety glass that creates a maximum visual area with a minimal profile, the clear choice is Vetrotech Saint-Gobain's patented Structure System and All-Glass Door products.

Our Structure System, made from 60-min. SGGSwissflam® glass, can be used to create walls with views unobstructed by frames or mullions. Available to complete the look of transparent elegance is our All-Glass Door, the world's first 20-min. glass door product.

Contact us for more information. Our knowledgeable staff will be happy to help you.

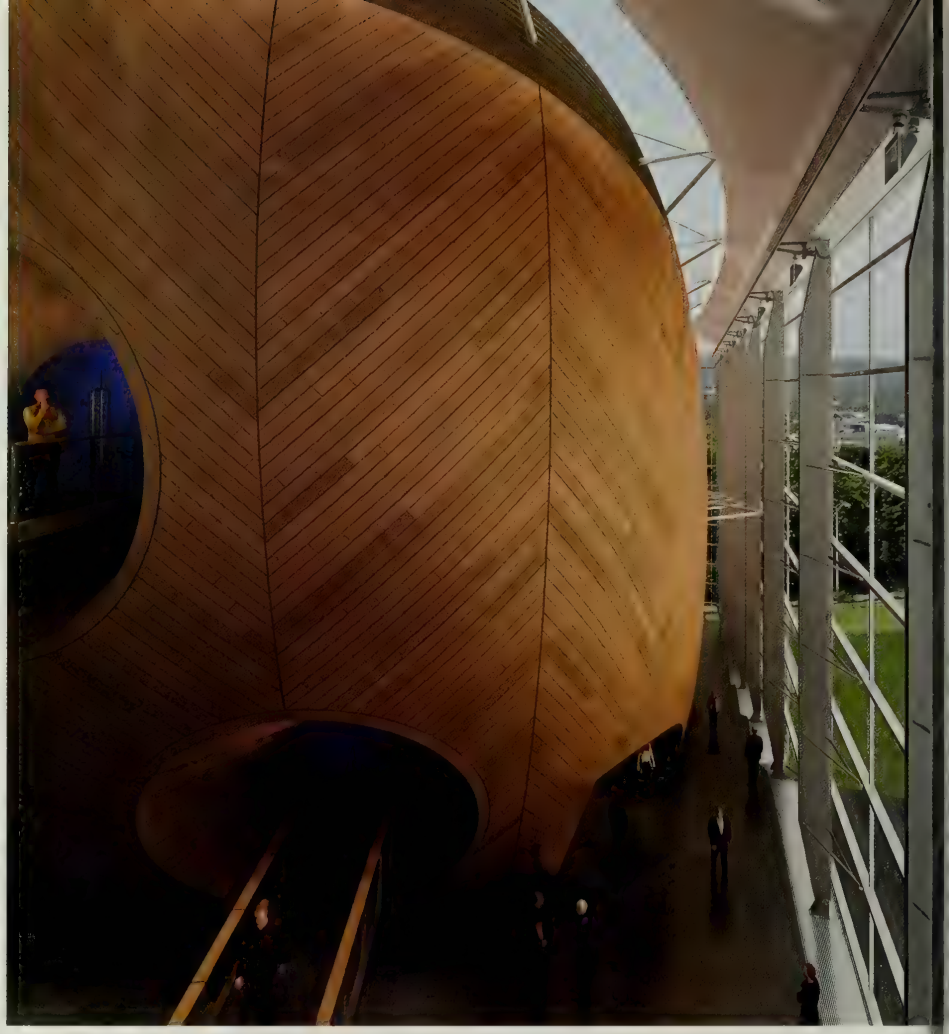
Vetrotech is a division of Saint-Gobain Glass, a business with centuries of glass-making tradition.

Vetrotech Saint-Gobain
888-803-9533
www.vetrotechusa.com

SAINT-GOBAIN
VETROTECH

CIRCLE 55 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Zoom In



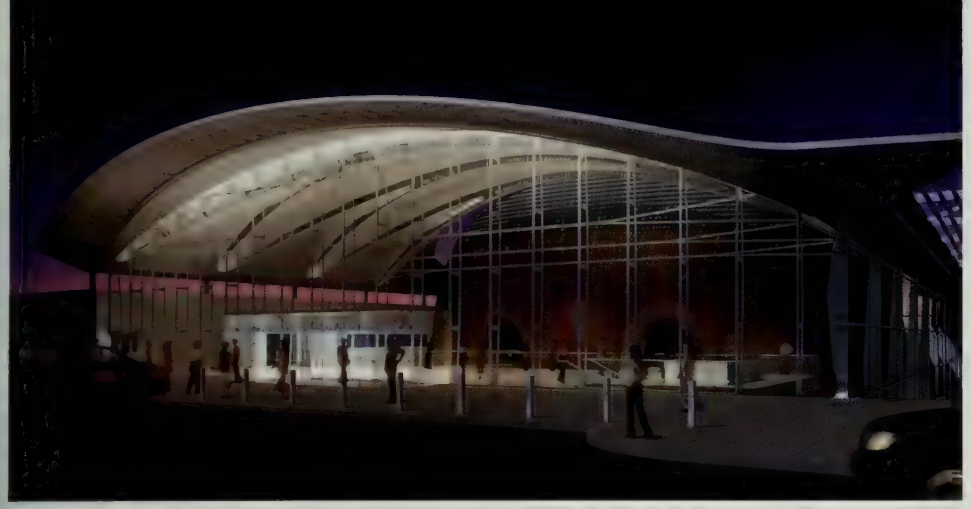
EMPAC will be nestled into a hillside site at RPI (below). For ease of production and assembly, the concert hall's "hull" (right) is divided into 12 sections, and the cedar planks arranged in a herringbone-like pattern; about a quarter of the planks will be milled with CNC machinery. The audience will enter via six conical portals in the hull.

Experimental Media and Performing Arts Center (EMPAC), Troy, New York



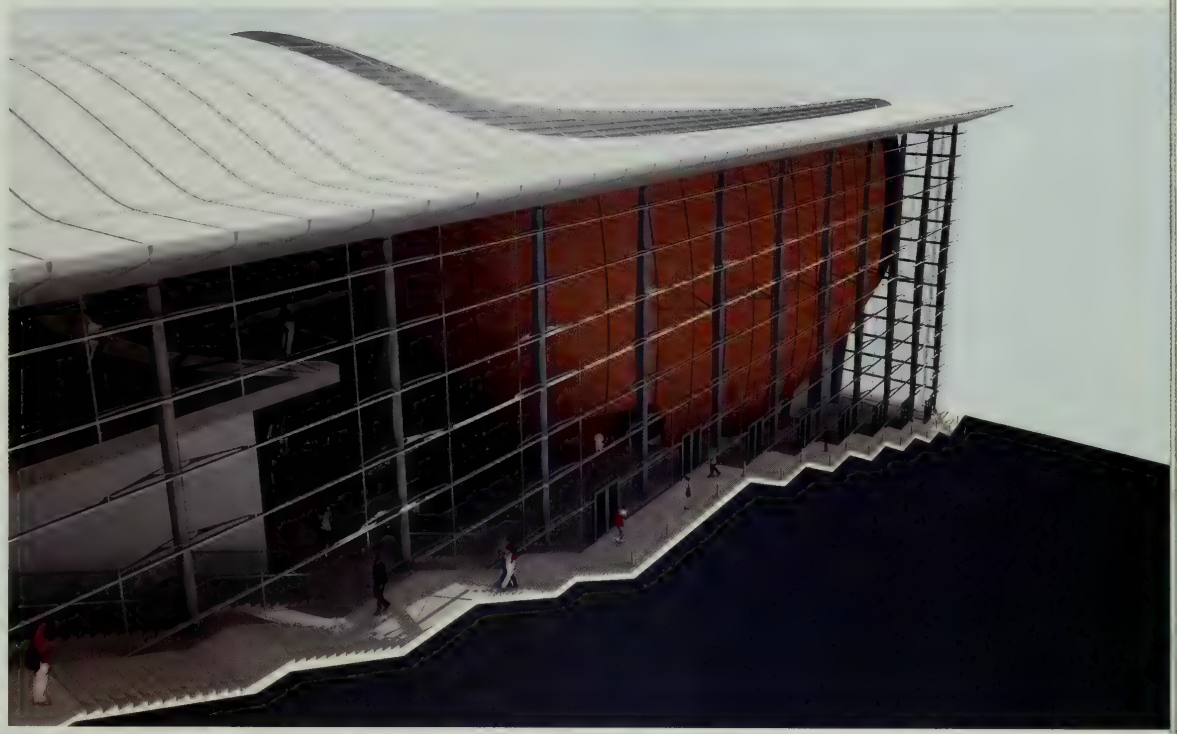
By Deborah Snoonian, P.E.

Rensselaer Polytechnic Institute's new arts center aims as high in design, materials, and systems as it does in program. Rising at the edge of the university's campus is the ambitious Experimental Media and Performing Arts Center (EMPAC), which will house traditional performance spaces for music, dance, and theater; high-tech galleries for experimental and digital arts; and professional-grade studios for audio and video production. Designed by Grimshaw Architects (with David Brody Bond as architects of record), the glass-enclosed, 203,000-square-foot structure features a hot-water heating system integrated into the mullions of the north curtain wall to mitigate the frigid drafts of upstate New York winters. Its 1,200-seat concert hall will be enclosed in a shiplike hull made of cedar planks; the audience will feel like they're sitting inside a violin. Acoustical consultants Kierkegaard Associates tested 50 different fabrics for the concert hall's hung ceiling before settling on Nomex, a canvaslike flame-retardant fabric more often used to make jumpsuits worn by NASCAR drivers. Slated to open its doors in 2007, EMPAC may just turn the modest town of Troy, New York, into an avant-garde arts mecca.



The skylight, visible from the east entry (left), will be made from ETFE, an advanced material that's related to Teflon. It weighs only 1 percent of the equivalent area of insulated glass, which allows the skylight to span long distances with few mullions. The skylight would cost four times as much if it were designed in glass.

German curtain-wall manufacturer Gartner proposed a facade-integrated heating system using hot water pumped through the mullions of the north curtain wall (right), the first large-scale application of this technology in the U.S. Engineers Buro Happold worked with Gartner to devise a proper zoning configuration for the system.





Panels of Nomex (top in image at left), an acoustical fabric, will be rigged like sails to steel posts installed in the concrete ceiling of the concert hall. Nomex reflects high-frequency sounds but allows low-frequency sounds to travel straight through and reverberate against the ceiling above. The walls of the hall will be made of cast stone.

Tensioned Membrane. Relaxing Architecture.

GRABOPLAN



Tensioned membrane
structures are relaxing. And fun.
Go to a football game, do some shopping,
board a cruise ship, catch a plane, listen to a concert.
Do it all under a Graboplan membrane roof that protects
you from glaring sunlight, driving rain and howling snowfall.
All while transmitting comfortable diffused natural light.
Relax. Graboplan structures take on the coldest winters,
the hottest summers, the strongest winds.
Any size structure, any place, any season.

716.759.1170 www.graboplan.us

Graboplan

CIRCLE 56 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Tech Briefs

Baton Rouge's new arts complex sports a shimmering facade • In Beijing, warped surfaces befit a new planetarium • Templates for hospital design speed construction in California

BYTES

The American Society for Testing and Materials (ASTM) recently replaced [illegible] product specifications with [illegible], which applies to many gypsum products used in construction. [illegible] were made with this change. The new standard will be [illegible].

The Turkish Building and Information Center recently established an online museum at www.archmuseum.org as a first step toward building a planned but long-delayed Turkish Museum of Architecture. The Web site contains photos, biographies, and documents highlighting the contributions of Turkish [illegible] to global practice.

A recent study at Cornell University found that workers in chilly offices (below 70°F) worked slower and made more typing errors than those working in warmer offices. To analyze the results, researcher Alan Hedge developed software that synchronized indoor temperature with productivity.

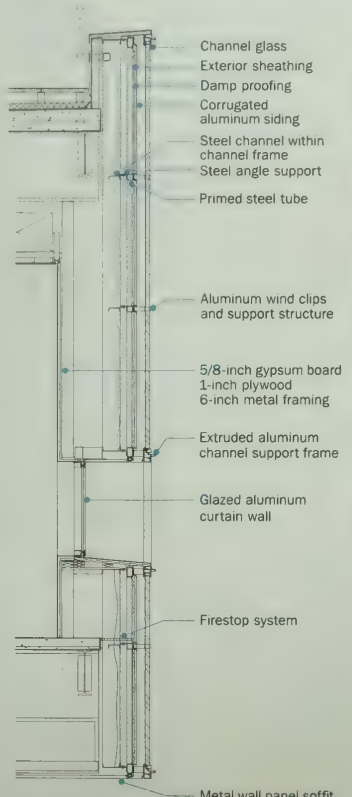
Researchers at Brookhaven National Laboratory, in Long Island, New York, recently pioneered a small-scale machine that recreates the high pressures and low temperatures found on the sea floor. It will enable scientists to study how to harvest the vast quantities of frozen natural gas that reside there.

Scientists at the Jet Propulsion Laboratory have discovered that huge ocean waves create a humming sound in the earth that can be detected with highly sensitive seismometers. The breakthrough may one day allow researchers to predict when and where earthquakes may occur.

Channel glass and reflective aluminum brighten the Shaw Center



At the Shaw Center, the facade's glass channels (above) vary in size and shape to create depth and complexity. They also act as a rain screen.



WALL SECTION DETAIL



Steel wind clips and staggered shelves hold the glass channels in place (above), and a layer of shiny aluminum siding sits behind the glass.

The intricate surface of the new Shaw Center for the Arts in Baton Rouge (see project story, page 86) are no accident—the architects chose materials and lighting to achieve an iconic look.

In developing the facade, the Boston-based design firm Schwartz/Silver Architects, along with associate architect Eskew+Dumez+Ripple, had several goals in mind: to make the building stand out like a beacon; to emulate the shimmering surface of the nearby Mississippi River; to break up the monumental quality of two building types—theater and art museum—that typically use few windows; and to protect the complex from Louisiana's rainy climate.

The design team initially planned to clad the building in copper, which they saw as a unique (not to mention shiny) option. But they later convinced their client to invest $2 million more in a facade that layers channel glass over corrugated aluminum coated with highly reflective metallic paint. The system would provide aesthetic intricacy and glow "like a Chinese lantern," the team said.

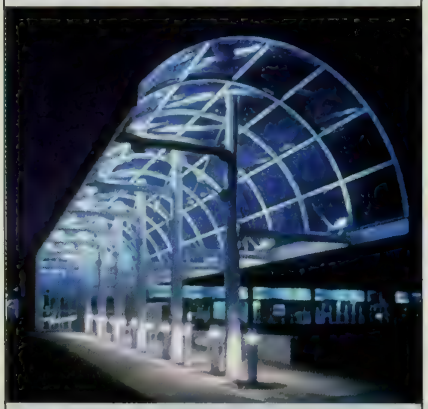
To break up the massing of the huge building and lend its surface depth and complexity, the architects conceived a staggered pattern of glass channels of various widths and lengths. Top and bottom supporting shelves also vary in length. These shelves, as well as wind clips, are connected via steel lattices to the building's structural-steel frame.

The glass channels are mounted 2 inches apart, and the aluminum siding sits 6 inches behind them to make cleaning easier and for pressure equalization. Since they act as a rain screen, the channels were tested with a full-scale mock-up, using equipment that simulated hurricane-force winds of 110 miles per hour. Vertical wire glass and aluminum

CPI
INTERNATIONAL
Quality Comes to Light™

World Class Leader in Translucent Canopies and Walkway Covers







Phone (800) 759-6985
www.cpidaylighting.com

CIRCLE 57 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

phalanges hold the channels in place, ensuring they won't fall off the facade if they break.

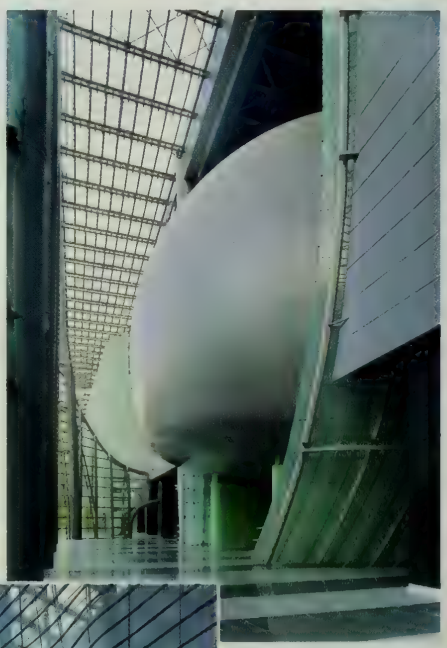
To illuminate the building, the team considered using fluorescent or LED-based light pipes, or incandescent lights integrated into the facade. Both strategies fell by the wayside because they created too much glare and also raised difficult budgetary and maintenance issues. The building is instead lit from eight separate exterior locations, and at night, the lights reflect back and forth off the painted aluminum and glass curtain wall, creating an ethereal, haunting effect.

All are happy with the result. "It was a no-brainer," says Schwartz/Silver partner Chris Ingersoll, AIA, of the switch to glass. "It was vastly superior for creating visual interest." *Sam Lubell*

A planetarium's curves hint at the mysteries of the cosmos

Beijing's adventurous new planetarium stands out in a country still adjusting to the idea of Western architectural Modernism. With its compound-curved glass walls and variety of high-tech display spaces, the building projects the progressive, modern image that Beijing hopes to buff when it takes center stage during the 2008 Olympics.

It was those forward-looking qualities that Beijing's mayor demanded when he rejected the four submissions he received in an invited competition for the planetarium. One team, impressively called the China Space, Civil, Building, Engineering, Design & Research Institute, invited architect Nonchi Wang to help them amend their entry. Rather than revise it, he boldly designed a new building from scratch in 14 days—and snared the commission.





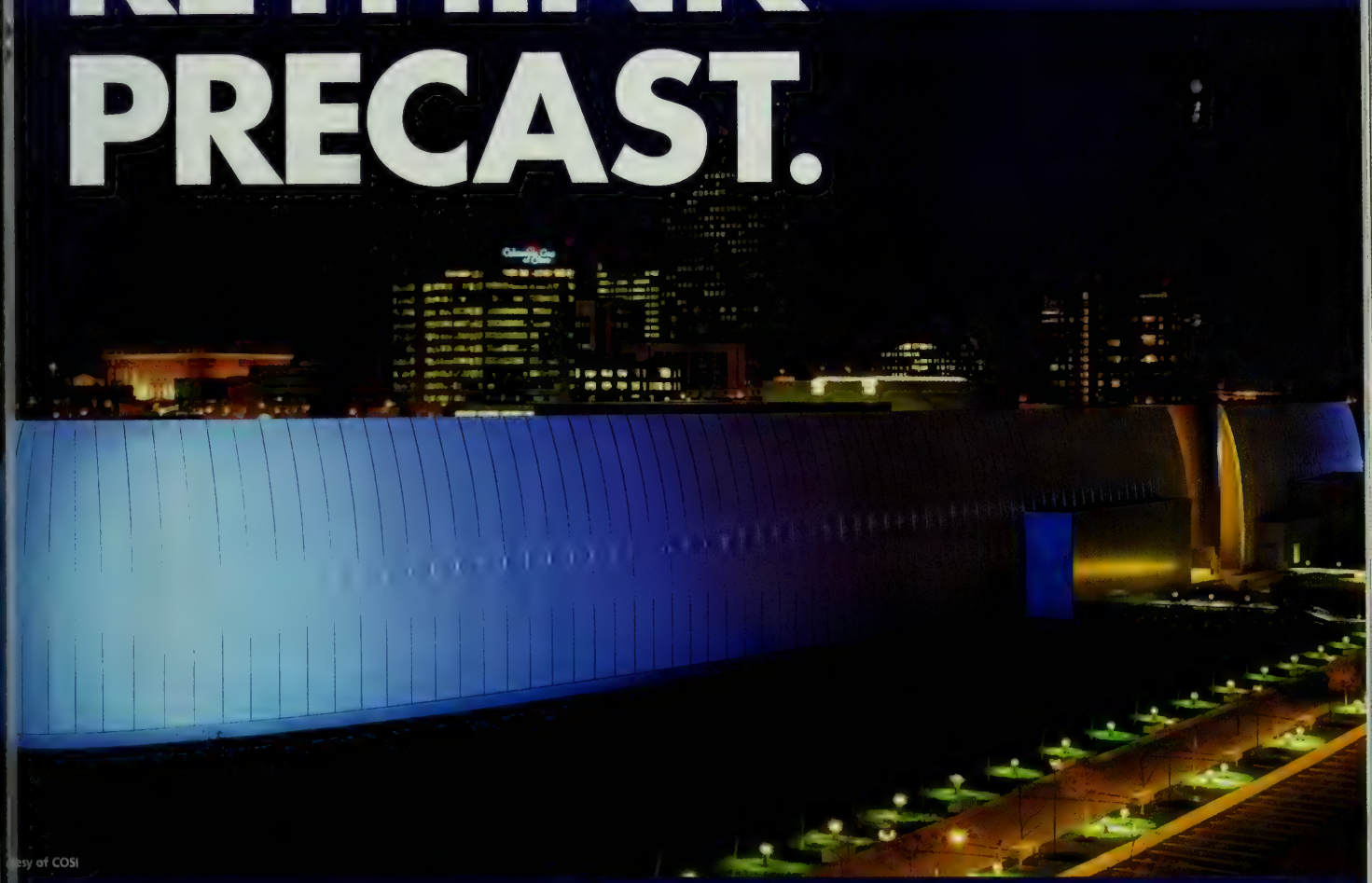
The shapes of the display spaces (above) were inspired by the phenomena of physics. The curved glass panes and frames for the curtain wall (left) were manufactured simultaneously in China.

At once didactic and allusive, the planetarium incorporates forms that represent essential concepts in physics and cosmology, like relativity, warped space, and string theory. The 210,000-square-foot building is an extended rectangle with a long, north-facing glass wall, with gray granite cladding its other three sides. Within it, three deformed spheres "signify the fundamental particles of quantum mechanics in dynamic states," says Wang. They house a 240-seat digital-projection planetarium (the only one outside of New York), a 48-seat theater equipped with motion simulators, and a "4D" theater featuring 360-degree image projection. Five undulating vertical tubular forms, meant to evoke string theory, contain elevators and stairwells and wrap the planetarium and 4D theater.

To represent the warps and curves of outer space, Wang designed the glass curtain wall with bulges and depressions, marking the entrances with distinctive saddle-shaped curves depicting half of a "wormhole," the term for a "shortcut" in Einstein's space-time continuum. (Wang is careful to call his design an analogy, since these phenomena resist direct or literal representation.) He built virtual models of the building using RHINO software, which also enabled their manufacture.

The double-curved glass walls were of two types, one more complex than the other. Inside, the tubular "strings" are detailed like shingles, with each course of glass slightly overlapping the one below. But the external curtain walls had to be

RETHINK PRECAST.



esy of COSI

CIRCLE 58 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

High lets you take precast design farther than you ever dreamed possible. That's why internationally renowned architect Arata Isozaki relied on precast concrete to meet the unique challenges of the striking Center of Science and Industry (COSI) in Columbus, Ohio. High's unparalleled commitment to new technology and innovation has led to advancements such as carbon fiber reinforced CarbonCast™—precast that's stronger, lighter and more durable, allowing a virtually unlimited selection of colors, textures and finishes at no additional cost. And the 15'-wide MEGA-Tee deck system enables wider spans and more open plans in total precast buildings and parking garages. Cutting-edge structures like COSI are possible with High's expert technical assistance in all phases of a project, from design to erection. High gives architects the flexibility to explore unique solutions while ensuring a job is completed on schedule and on budget. Call High to learn more about how to rethink precast.

HIGH CONCRETE GROUP

HIGH CONCRETE ▪ CONCRETE INNOVATIONS & ANSWERS™ ▪ CALL US AT 800-PRECAST ▪ WWW.HIGHCONCRETE.COM

get
I ~~need~~
cabinetry
specs to
create great
designs.
at
kraftmaidspec.com



Only KraftMaidspec.com lets you download AutoCAD drawings of every single cabinet and gives detailed information on door styles, finishes, storage solutions and our quality construction. Visit KraftMaidspec.com and see why so many architects rely on it as their design resource.

Made just for you.
KraftMaid
Cabinetry

www.kraftmaidspec.com

weathertight and double-glazed for thermal insulation, and thus the glass was designed to fit into metal T-bar frames with gasketing. In the curved segments, each frame and pane (approximately 3 feet by 10 feet in size) has a unique shape. To complicate matters further, a tight schedule dictated that the glass and frames be fabricated simultaneously, rather than by the usual method of building the frames first and then cutting the glass to fit. It was the first time anything like this had been tried in Asia, and Wang calls it "a new benchmark for China."

Appropriately, Wang bridges the worlds of East and West. He's a Taiwanese native who earned his first architectural degree in that country and his second one at Yale; his small firm, Amphibian Arc, is based in Los Angeles. So far, he's shown an uncanny affinity for public projects related to science, with the Shangyang Science Museum and the Beijing Planetarium under his belt, and soon, a monument to Copernicus to be built in Poland. *John Pastier*

For one hospital owner, familiarity in design breeds success

Hospitals strive to personalize patient care, but complex regulations and codes make unique health-care architecture a serious challenge. Recently, one large hospital chain began addressing this problem by taking a cookie-cutter approach to the manner in which its facilities are designed.

Kaiser Permanente (KP), the largest health-care provider in California, is using design templates created with the help of two San Francisco architecture firms to build three new hospitals now under construction. With only slight variations due to local demographics and regulations, the trio will be essentially the same inside and out. Eventually, these templates will guide construction or renovations of 20 KP health-care facilities by 2013, says Christine Malcolm, KP's senior vice president for hospital strategy. The Oakland-based company hopes template designs will mean faster approvals, fewer change orders, and improved patient care.



KP isn't the only health-care organization thinking along these lines. "Templates can potentially create an environment that's safer, because the designs standardize the way care is being delivered," says Brett A. Esrock, executive vice president and chief operating officer at SSM St. Joseph Hospital in Kirkwood, Missouri, which recently brought together KP officials and dozens of other design and health-care experts for a brainstorming session for a new St. Louis hospital in its early planning stages.

Chong Partners Architecture and SmithGroup formed Chong/SmithGroup to guide the KP project. The architects participated in the template development process with contractors, KP staff, and more than 600 clinicians and other health-care professionals.

Voluminous state building regulations, many tied to earthquake safety, spurred this strategy. "In California, it usually takes over six years to open a hospital," says John Kouletsis, AIA, KP's national director of planning and design services. "Up to two years of that time is spent in the regulatory process."

The template designs have already saved time. In May, builders completed the steel frames for two of KP's new hospitals, only 30 months into the building effort. "We're at least a year, maybe 18 months, further along than usual," says Carl Christiansen, AIA, vice president with SmithGroup. KP believes templates will also codify best practices it has documented relating to room design and the placement of clinical equipment for efficient access by doctors and nurses.

The templates detail hospitals ranging in size from four to six floors. Each facility sports a circular, two-story lobby and two primary nursing units featuring punched windows. A diagnostic and treatment wing sits in the rear of the building. Glass walls allow natural light to brighten the cafeteria, waiting space, and circulation spine. "We pushed to make the building feel as light as possible by using as much glazing as we could," says Carl Hampson, AIA, an associate with SmithGroup.

As the remaining hospitals go up, KP envisions only minor changes to the templates, based on improvements or corrections revealed during construction of the first facilities. Still, each hospital will be unique in its siting and specific medical program, says SmithGroup's Hampson. ***Alan Joch***

CIRCLE 59 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Indiana Limestone Company brings you a distinctive line of building veneer products.

Biltmore™ CLASSIC



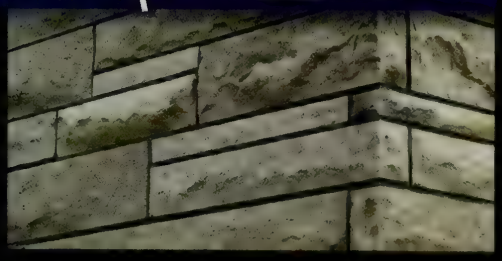
Modular full bed Indiana Limestone sawn veneer. Real limestone at an installed cost substantially less than custom cut stone.

ROCKFORD™ ESTATE BLEND



A richly textured, lightly tumbled Indiana Limestone. The perfect accent to brick and other materials that adds beauty and value.

BERKSHIRE™



Full color blend random length split faced Indiana Limestone veneer. Timeless beauty of natural stone with an ease of installation.

The Limestone Classics Series of natural stone building products utilize the same timeless materials that have made Indiana Limestone a celebrated staple of the construction industry for over 150 years.

For information on how Indiana Limestone can add value to your building project, call **800-457-4026** or visit **IndianaLimestoneCompany.com**.

INDIANA LIMESTONE COMPANY

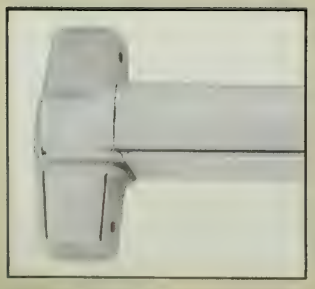
LIMESTONE CLASSICS SERIES

CIRCLE 60 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

This Is No Time To Find Out Your Life Safety Isn't Up To Code.



IR VON DUPRIN



Von Duprin 98/99 Series. The world's most specified exit device.

More than a century ago, Von Duprin invented the first exit device to improve building safety and prevent senseless deaths. Facility managers are still challenged with the inherent conflict of maintaining a secure building and providing safe emergency egress. Understanding complex fire codes, changing building uses and ADA laws can be difficult, yet is critical to life safety. No one understands these issues like we do. Our network of 24 Security & Safety Consultant℠ offices and Security Centers throughout the U.S. and Canada is providing needs assessments and offering integrated solutions. These include biometric, electronic and mechanical security, as well as software network integration—all designed to ensure your building is safe and secure.

To find out more about Von Duprin life safety solutions, visit *irsecurityandsafety.com* or call 1-877-840-3621 to contact one of our 24 Security & Safety Consultant offices.

IR Security & Safety
Proven Source. Proven Solutions.™

An IR Ingersoll Rand business

CIRCLE 61 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Tech Products

Design tools, presentation devices, and more

By Deborah Snoonian, P.E.

Revit Building 8
Autodesk
www.autodesk.com
Windows only

Targeted for architectural users, the release of Building 8 marks Autodesk's shift toward segmenting its flagship 3D design software along disciplinary lines. (Revit Structure will make its debut later this year; Revit Mechanical is in the beta-testing stage.) New features in Building 8 include built-in interference checking, improvements in editing families of components like doors or windows, and a simplified method to publish directly to Buzzsaw, Autodesk's online collaboration tool. The software can produce DWG files for those needing to share information in AutoCAD's popular file format, and 3D solids created in Autodesk's ADT or Building Systems can be imported or linked into Building 8 for checking interferences or other tasks.

Blender
Blender 3D
www.blender3d.com
Window, Mac, and others

This product for 3D modeling, animation, rendering, and post-production was killed off by its parent company after the dot-com crash in 2001 but resurrected when one of its original creators formed a nonprofit foundation to continue its development. Blender is a free (yes, free), community-based, open-source software program that works on multiple operating systems to help designers create 3D content for presentations, Web sites, and other media. Though it lacks the robustness needed to model buildings geometrically, smaller practitioners and firms on tight budgets will find it useful for a variety of everyday visualization tasks.

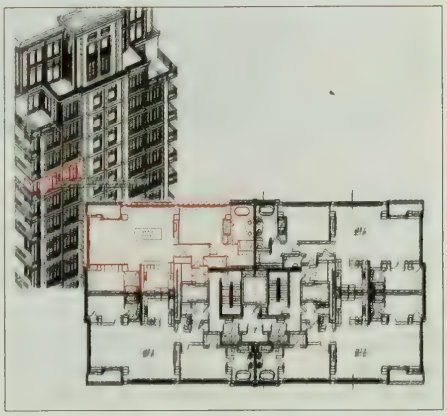
For more information on technology for architects, including reviews, vendor lists, and links, go to Architectural Technology at **www.architecturalrecord.com**.

SpacePilot
3D Connexion
www.3dconnexion.com
Windows only

This input device promises to reduce the number of keyboard and mouse commands needed to produce drawings, visualizations, and other design documents. It features adaptive sensing technology and an array of keys that can be customized, allowing designers to save their finger strength for Luddite hobbies like guitar playing or knitting.

PowerCAD CE
GiveMePower
www.givemepower.com
Windows only

PowerCAD is an AutoCAD-compatible program for mobile and wireless devices like cell phones, handheld organizers, and tablet PCs. The latest release features one-button e-mailing, DWF file exporting, and enhanced support for connecting with Bluetooth-equipped wireless devices. It also allows users to add voice notes to drawings, a helpful feature, since viewing them on small screens is so hard on the eyes.



Revit Building 8, geared toward architects, is the first in a series of Revit releases that will be tailored for different AEC professionals, such as structural and mechanical engineers.

You can make renderings for free with Blender, available at www.blender3d.com.



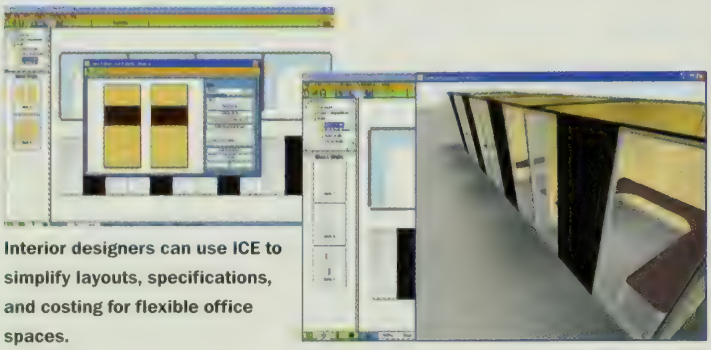


The SpacePilot reduces the number of keystrokes and mouse clicks made by CAD users.



PowerCAD CE helps architects edit, annotate, and e-mail drawings on the go from wireless and mobile devices.

Tech Products



Interior designers can use ICE to simplify layouts, specifications, and costing for flexible office spaces.

The PowerLite S3 has different viewing modes for still photos, animations, and video, as well an integrated speaker for broadcasting music or sounds.



ICE
Dirtt Environmental Solutions
www.dirtt.net
Windows only

Despite the rather unfortunate name of the company that makes it, ICE helps interior designers chill out about arranging modular workspaces. This Java-based program, which can be used on its own or as a plug-in to Autodesk or Bentley products, enables designers to explore and compare different layout concepts (e.g., linear or clustered arrangements of cubicles) using a library of interior components from manufacturers who subscribe to ICE's service. Here's the best part—the software automatically generates specifications and a cost estimate based on each layout that's explored, obviating the need for error-prone manual calculations and revisions.

PowerLite S3
Epson
www.epson.com
Windows and Mac

With a price under $1,000, this multimedia projector is a budget-friendly option for solo practitioners and small design firms who need a way to present still and moving pictures. The S3 has various settings for viewing photographs, videos, or even sports films to help make images crisp and clear. An internal speaker lets sound come through, and a port for plugging in a computer monitor allows a presenter to see images on-screen while facing the audience. Users can personalize the S3 with start-up graphics and assign security codes to keep unauthorized users from tapping in.

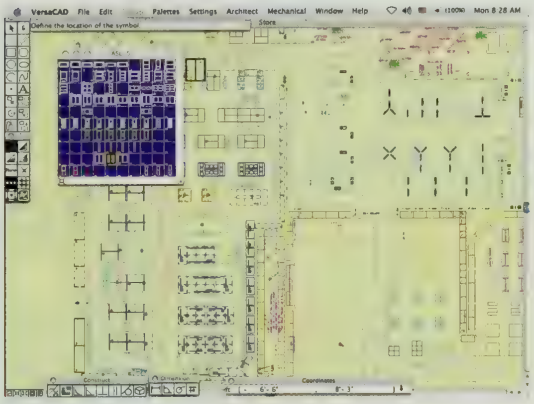


CIRCLE 62 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The VersaLaser VL-200 cuts, engraves, and marks a wide variety of materials—and is compatible with most graphics programs.

Archway Systems has released a version of VersaCAD specifically for Mac users running OS version 10.3 or later.



VersaLaser VL-200

VersaLaser
www.versalaser.com
Windows and Mac

Cutting model parts by hand is so 20th century. Leap into the digital age with the VersaLaser VL-200, which uses a computer-controlled laser beam to cut, score, and contour sheets of paper, plastic, wood, fabric, and other materials into any shape you desire. The printer can accept files from many popular drafting and graphics programs, including AutoCAD, Photoshop, and CorelDRAW. Retailing for around $8,000 or leasing for under $200 per month, the VL-200 is less costly than 3D printers used for model making—and while it's still not the cheapest piece of office equipment you'll ever buy, just think of what you'll save in X-Acto knives.

VersaCAD for Macintosh

Archway Systems
www.versacad.com
Macintosh only

VersaCAD has been available for Macs and Windows-based computers for several years, but the developers launched a new version a few months ago designed to run on Macs using OS version 10.3 or later. The software takes advantage of the Mac's graphical interface and offers users the ability to import files created in AutoCAD and other programs. Other features include an extensive library of symbols and a special pulldown menu for architectural drawings, with functions handy for creating doors and windows. With a retail price of under $700 per seat, it's a modestly priced addition to the even more modest number of CAD products available for Macs.



AXIUM
It's About Time

ra -- Accounting and
iness Management
ution for Your A/E Firm

a, designed for flexibility and
of use, is the most powerful
affordable accounting and
ness management solution
ifically for A/E firms. Ajera
vs you to customize tasks,
rts, and invoices to increase
ect profitability, maximize
flow, and empower the
ess of your firm.

For more information
act Axium at 800.872.1540
r sales@axiumae.com

What empowers your firm's success?

Increasing Project Profitability
Ajera's "at-a-glance" Dashboard consolidates critical project information on your desktop in real time to keep projects on track and profitable.

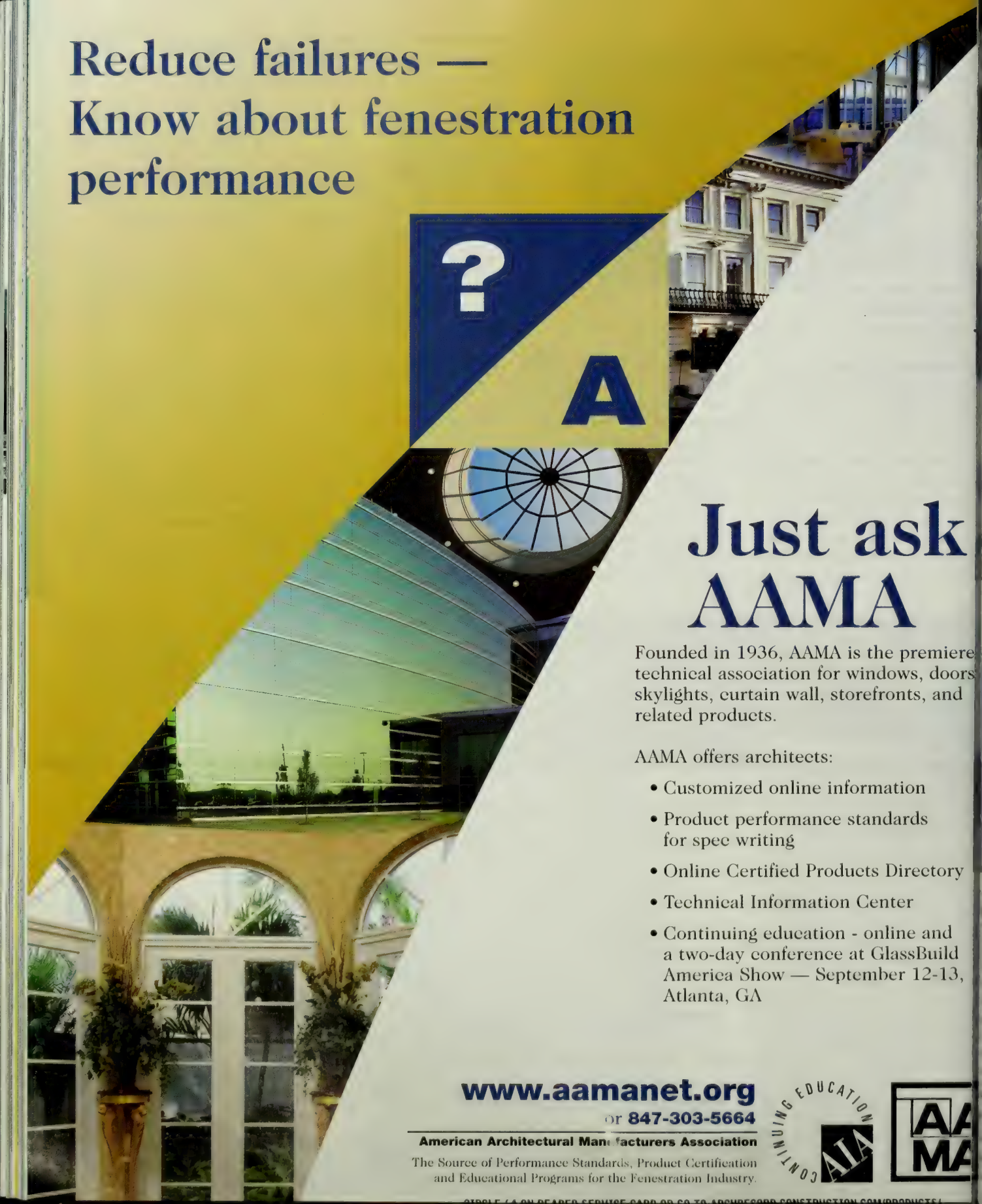
Maximizing Cash Flow
Ajera's integrated environment unites time entry, consultant tracking, billing management, and easily customized invoicing to help you get bills out and cash in -- faster.

Better Business Management
Ajera provides the customized, industry specific reports and trending information to help you make the best decisions for your firm.

Ajera's complete accounting and business management solution.

Sign up for a FREE Internet Presentation at www.axiumae.com and realize the benefits Ajera can provide your firm!

Reduce failures — Know about fenestration performance



Just ask AAMA

Founded in 1936, AAMA is the premiere technical association for windows, doors, skylights, curtain wall, storefronts, and related products.

AAMA offers architects:

- Customized online information
- Product performance standards for spec writing
- Online Certified Products Directory
- Technical Information Center
- Continuing education - online and a two-day conference at GlassBuild America Show — September 12-13, Atlanta, GA

www.aamanet.org

or **847-303-5664**

American Architectural Manufacturers Association

The Source of Performance Standards, Product Certification and Educational Programs for the Fenestration Industry.

CONTINUING EDUCATION AIA

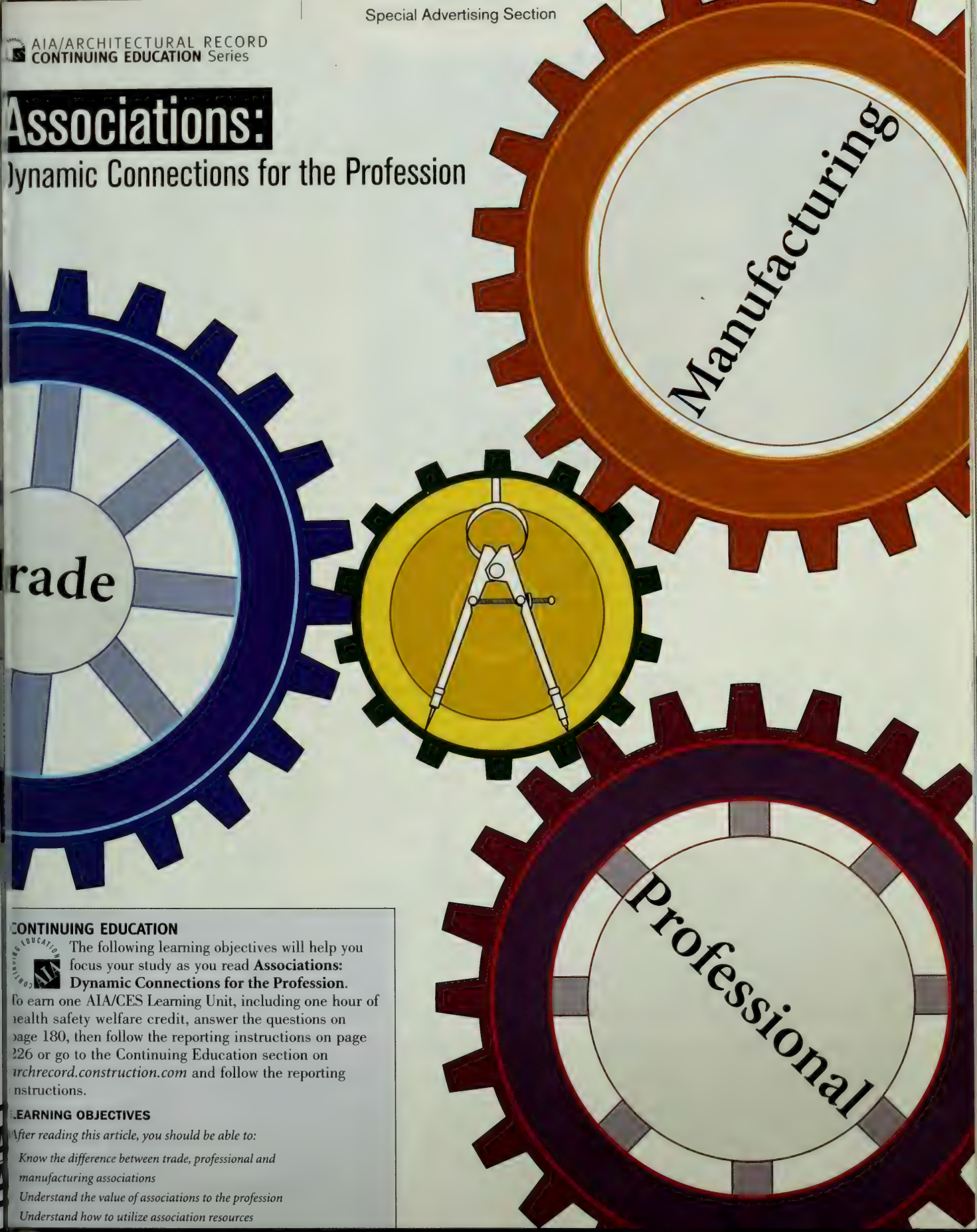
AAMA

CIRCLE 44 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

Associations:

Dynamic Connections for the Profession



CONTINUING EDUCATION

The following learning objectives will help you focus your study as you read **Associations: Dynamic Connections for the Profession.**

To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 180, then follow the reporting instructions on page 226 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Know the difference between trade, professional and manufacturing associations*
- *Understand the value of associations to the profession*
- *Understand how to utilize association resources*



How do associations serve the profession?

"A multitude, from whatever cause assembled, seldom remains long silent." Those words, credited to famed Scottish poet Sir Walter Scott, never were so true as when we speak about associations. Licensing, standardized metrics, historic preservation, fair wages, safety principles and an overall respect for the design and construction profession are just a few things we can thank associations for championing.

Advocates of the occupations they serve, associations offer an opportunity for members to exchange ideas – an exchange that ultimately results in higher standards of professionalism that are continually being established, met and advanced. The design and construction industry has more than 100 national associations, not counting regional and local groups. These are the industry's preeminent promoters of research, best practices, product information, and continuing education, and are frequently one of the top resources for career and job opportunities. Often, these associations provide all this for free or for a nominal fee to the public on their Web sites, which have become a primary form of communications among associations.

The terminology used to describe associations often generates much confusion – among association staff, members and the general public. There are three basic types of associations: trade, professional and manufacturing. While they have many of the same goals of building the profession, which is leading to a growing overlap in membership, there are differences. This article will explore overall association characteristics, discuss their value through industry examples, and provide you with a roadmap on how to best use their resources.

According to the Washington, D.C.-based American Society of Association Executives, 95 percent of associations offer education programs for members, making that service the single most common association function. This is followed at 89 percent by convention planning activities. Using Web sites and email to share information with members came in at 81 percent, while public information activities at 79 percent.

Americans active in associations devote more than 173 million volunteer hours each year, with a time value of more than $2 billion.

Associations are valued so highly in the United States, that they are given favored tax status with both state and federal governments. Associations are generally organized and operated as both nonprofit and tax-exempt entities. Nonprofit status refers to incorporation status under state law; tax-exempt status refers to federal income tax exemption under the Internal Revenue Code. This does not mean that associations cannot earn profits or that they do not pay taxes. Although largely tax exempt, associations still pay more than $1.1 billion annually in local, state and federal taxes.

Even though they are nonprofit organizations, associations are permitted to generate income and still retain their nonprofit status. As nonprofit organizations, what associations are barred from doing is distributing their profits to individuals who control the organizations. Associations with a nonprofit status have elected to undertake programs to benefit members and the public rather than private individuals. By law, their profits must be dedicated to furthering the purposes for which they were organized. All earnings must be "reinvested" in the organization.

What does tax exemption mean? Tax-exempt status means that an organization is exempt from paying federal corporate income tax on income generated from activities tied to the purposes for which the organization was formed. The association must pay federal corporate income tax on income that is not related to its purposes. They also must pay a variety of other taxes, such as payroll and real estate taxes.

Why all this talk about taxes? Think about it. How many organizations within the United States are given such freedom to use their funds to passionately promote their cause and educate the public? Apart from educational institutions, associations are the foremost way to become skilled on a subject. And in a profession like architecture, oftentimes the best lessons are learned outside of school, from those people practicing and furthering the profession every day in trade, professional and manufacturing associations.

Each of these association types use similar communication techniques, such as annual meetings, Web sites, local chapters, annual shows and varied publications that must be explored on an individual association level.

Trade associations

A trade association is defined as an organization of business competitors, in a specific industry or business, that is interested primarily in the commercial promotion of products or services. Membership is usually held in the name of a business entity. The association's services may include business ethics, management practices, standardization, commercial (i.e., statistical) research, publication, promotion, and public relations. The basic tenet of many trade associations in the design and construction field, such as the National Electrical Contractors Association and the International Brotherhood of Electrical Workers (NECA-IBEW); the Westlake, Ohio-based Marble Institute of America (MIA); and the Purcellville, Va.-based National Terrazzo & Mosaic Association, Inc. (NTMA); is that there is strength in numbers.

That's certainly the case when promoting accepted practices. Trade associations are often the originating source for codes of ethics and professional and safety standards that govern a variety of professions. So if you want to save time and get that spec right, trade associations are key associations to call.

TAKE ADVANTAGE OF ASLA OPPORTUNITIES!

Architects can join ASLA as ASLA Affiliate Members:

- Gain insight into the art and practice of landscape architecture with a subscription to award-winning **Landscape Architecture** magazine;
- Increase your knowledge through ASLA continuing education opportunities, such as LATIS and the Annual Meeting & EXPO;
- Connect with landscape architects in your community and around the globe;
- Stay up-to-date on news and events in the landscape architecture profession with our bi-weekly online newsletter, *LAND Online*;
- Enter the ASLA Professional Awards at the special ASLA member rate;
- Receive complimentary research services provided by ASLA's professional research librarian;
- And much more!



Subscribe to LANDSCAPE ARCHITECTURE magazine—the authority on landscape planning and design. Stay on top of the latest news, ideas, resources, and developments in design, technology, planning, and ecology.

Attend the ASLA ANNUAL MEETING & EXPO and earn continuing education credit, October 7–11, 2005, in Fort Lauderdale, Florida. With more than 85 continuing education opportunities to choose from, the 2005 ASLA Annual Meeting & EXPO provides plenty of great learning options. AIA members already receive discounted rates on registration—join ASLA to save even more!



ASLA

Visit www.asla.org to join, subscribe, or register for the Annual Meeting and to learn more about ASLA opportunities for architects.

The American Society of Landscape Architects
636 Eye Street, NW • Washington, DC 20001
1-888-999-ASLA • www.asla.org

CIRCLE 65 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Take, for example, the NECA-IBEW. These two century-old organizations are dedicated to enhancing the electrical industry through continuing education, labor relations, current information and promotional activities. Backed by the high-quality workmanship provided by electricians and managers trained in the NECA-IBEW framework, NECA, together with a number of other associations in an ANSI-approved format – created and maintains the National Electrical Installation Standards (NEIS). The NEIS is dedicated to promoting higher standards and quality workmanship.

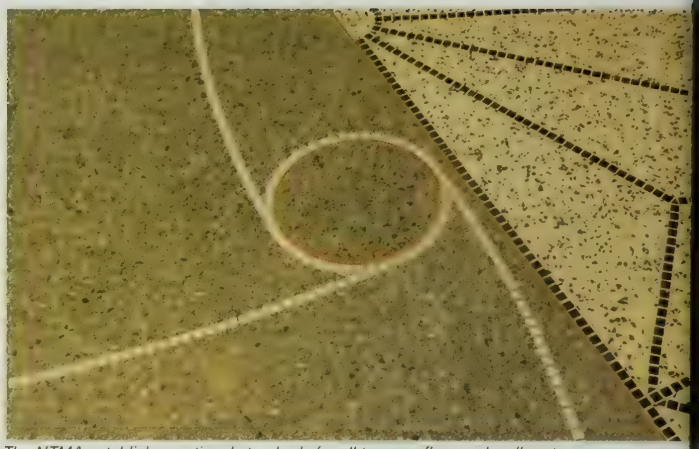
These standards go beyond the National Electrical Code, which is a life-safety code. First published in 1997, the NEIS is a voluntary performance standard that provides guidance as to the quality of the installation and workman-like practices. Although this requirement for installation of electrical products and systems in a "neat and workmanlike" manner appears in NEC Section 110-12 and six other places, according to NECA Executive Director H. Brook Stauffer, it isn't defined anywhere. NEIS does that.

For architects, referencing NEIS saves spec-writing time, and provides control over workmanship and long-term performance by preventing unrealistic "low-ball" bids that find their costs in extras and change orders since they've been given the job on price and not performance. As an enforceable part of the contract documents, NEIS can help reduce misunderstandings among architects, engineers, electrical contractors, owners and facility managers. Currently there are 28 standards covering everything from fiber optics to motor installations. Several other standards are currently under review. Standards can be accessed at the NEIS web site at neca-neis.org.

For more than 60 years, MIA has served as the authoritative source of information on standards of natural stone workmanship and practice and the suitable application of natural stone products. Membership in the association is worldwide and includes nearly 1,300 natural stone producers, exporters/importers, distributors/wholesalers, fabricators, finishers, installers, and industry suppliers – all committed to the highest standards of workmanship and ethics.

MIA publishes a monthly newsletter for members, markets a range of technical publications and consumer pamphlets on natural stone, sponsors business and technical meetings and seminars on industry-related topics, provides educational programming for architects and construction specification professionals, conducts an annual Pinnacle Awards competition recognizing outstanding natural stone projects worldwide and hosts an informative web site for consumers and design and construction professionals at usenaturalstone.com.

Trade associations are often the originating source for codes of ethics and professional and safety standards that govern a variety of professions.



The NTMA establishes national standards for all terrazzo floor and wall systems.

MIA provides complimentary technical advice and opinion to member firms and to architects seeking help with projects involving the application and use of natural stone. In addition, MIA has published the leading reference book for dimensional stone design and construction facts and details – *Dimension Stone Design Manual.* MIA is currently working to launch a natural stone industry accreditation program with a targeted introduction in 2006.

Raising the performance of the industry is also the goal of the NTMA. Founded in 1923, the association was started in Chicago by 20 contractors, 12 of whom are still members, to promote good standards, quality installation, and provide technical support. The association establishes national standards for all terrazzo floor and wall systems. While membership in the association is limited to terrazzo contractors who meet rigid proficiency standards and participate in continuing education seminars, like many trade associations, NTMA provides complete specifications, color plates and general information to architects and designers at no cost on their web site, ntma.com.

It's a technique that has spanned more than 600 years and can be seen in facilities from airports and stadiums to historic Italian palazzos. So why does such a traditional art form like terrazzo need an association? "As design and construction changes, so must the materials, and we're here to keep in step with what architects and contractors need for today and tomorrow," said George Hardy, NTMA Executive Director. "We're focused on providing thorough information – from design ideas to technical advice," said Hardy. For example, the NTMA has conducted extensive research on one of the hot topics affecting its members – how moisture affects installation when epoxy is applied on slab. Information about the results is available at the association's web site.

To further promote and celebrate the craft, NTMA, like many trade associations, hosts an annual design competition – the Honor Awards. These awards offer architects an opportunity to gain recognition for work in specific fields, where larger design competitions could be too expensive or daunting.

Showcased on NTMA's web site and featured in print materials, the winning projects help communicate various design possibilities. Designed by Langdon Wilson Architectural Planning in Los Angeles, the Getty Villa Renovation in Malibu took the top honor as the 2005 Job of the Year. The museum desired to duplicate terrazzo and marble floors found in Pompeii and classic Italian structures. The association provides details on how projects are executed and provides contact information for architects interested in learning more. And to promote the artistic qualities of process, NTMA also provides a Special Art Award. This year, RTKL Associates, Inc. of





When a design project begins to move forward, you want to be sure to cut your losses. That's why **savvy designers specify AWI Quality Certification** on custom architectural woodwork projects. AWI's internationally-recognized Quality Certification Program helps design professionals **verify the skills of woodwork providers, ensuring compliance** with the AWI Quality Standards during fabrication, finishing and installation when inspected.

Call **800-449-8811** or visit **awinet.org** to register your next architectural woodwork project.

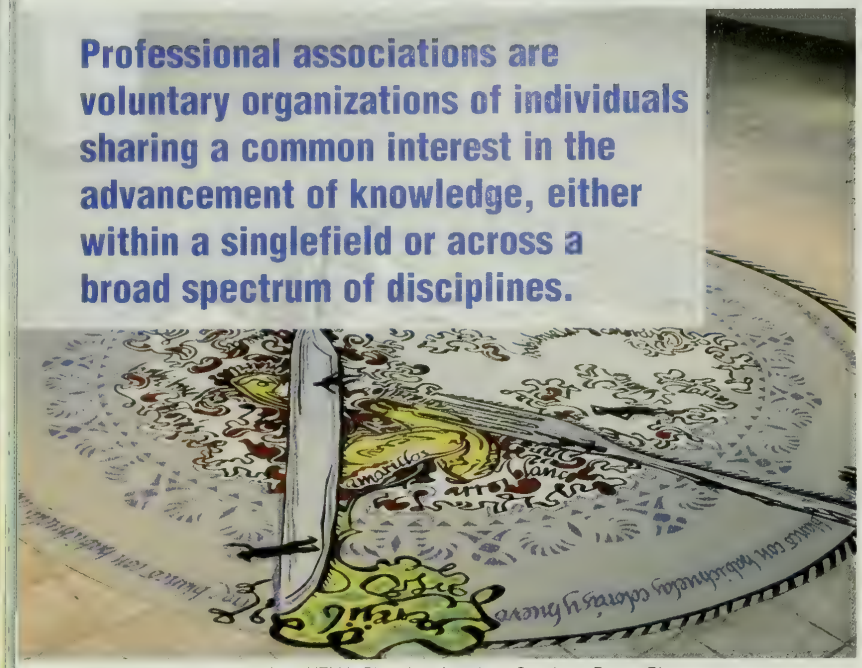
And get an extra measure of assurance before you're left in the dust.

AWI ARCHITECTURAL WOODWORK INSTITUTE

1952 Isaac Newton Square West, Reston, VA 20190 | telephone 703 733 0600 | fax 703 733 0584 | www.awinet.org

CIRCLE 66 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Professional associations are voluntary organizations of individuals sharing a common interest in the advancement of knowledge, either within a singlefield or across a broad spectrum of disciplines.



2005 Special Art Award from NTMA, Plaza Las Americas, San Juan, Puerto Rico

Washington, D.C., took the prize for the Plaza Las Americas in San Juan, Puerto Rico. The 12-foot art medallion shows off the fluid design potential of terrazzo and sets the mood for the entire food court area, which is part of a one million square foot mall addition.

Professional associations

Professional associations are considered a voluntary organization of individuals sharing a common interest in the advancement of knowledge, either within a single field or across a broad spectrum of disciplines. The major function of these organizations like the American Institute of Architects (AIA), the American Society of Landscape Architects (ASLA), the Design-Build Institute of America (DBIA), (all based in Washington, D.C.), and the Illuminating Engineering Society of North America (IESNA) of New York, the Construction Specifications Institute (CSI) of Alexandria, Va., the American Institute of Steel Construction (AISC) of Chicago, Ill., and the International Code Council (ICC) of Falls Church, Va., is to aid and encourage the collection, collation, and dissemination of knowledge for the benefit of their members and the community as a whole.

"There was no real contact, only competition," commented Peter Walker, FASLA, on the state of communication among landscape architects before the ASLA established a dialogue among leading professionals, with its CEO council. The council provides a secure forum for firm leaders to discuss details of the business, customer trends and current challenges. Providing such targeted networking groups is one of the most valuable offerings of professional associations.

Walker is Partner-in-Charge of Peter Walker and Partners, Landscape Architecture, Berkeley, Calif. Founded in 1983, the firm employs approximately 35 landscape architects, whose projects span the world, from the 1,000-acre Millennium Parklands in Sydney, Australia, to the World Trade Center Memorial in New York. "There are diverse interests in this profession, with some landscape architects focused on ecology, others on style, and even more focusing on everything in between," said Walker. "Professional associations give you the opportunity to hear what's really going on, but you have to put in the time."

While some associations put focus on one profession, others like DBIA take a broader focus. One of the youngest associations, DBIA was founded in 1993 to advocate and advance the design-build method of project delivery within the design and construction community. The method incorporates architecture/engineering and construction services under a single contract to provide a seamless team. DBIA members include practitioners from all project phases, plus public- and private-sector project owners.

"To build a building you need more than one discipline. Today you need to assemble a team of professionals – from insurers and owners to architects and facilities maintenance engineers," said Barry Bannett, CEO, DBIA of The Bannett Group, Ltd. of Cherry Hill, N.J. "We're focused on educating the industry on this method," added Bannett, who serves as an instructor for the association's certification program, Designated Design-Build Professional™. Currently, many GSA projects require the design-build method for their contracts, with expectations of it becoming the preferred project delivery method by 2011.

CSI also takes an integrated approach. Its 17,000 members represent all disciplines engaged in on-residential building design and construction. CSI's mission is to continuously improve the process of creating and sustaining the built environment. They do that by facilitating communication among all those involved in that process. "Our work is about creating a common language among the industry by providing uniform ways of classifying the entire life-cycle of a project," said CSI Executive Director Karl Borgstrom, Ph.D. "Members like our association because we're diverse – we have people from all over the industry, the nation and the world working together to improve the way we work together."

In the 1970s, CSI developed MasterFormat™, which provided a method for organizing all specifications needed to construct a building. Through MasterFormat's 16 divisions, the industry took a major step toward a uniform approach for the organization of information contained in construction project manuals. CSI recently released an updated format and has been instrumental in developing the National CAD Standards and the new OmniClass™, that provides an organized structure and common language for all information generated by the AEC industry.

A unique education offering from CSI is their Certified Product Representative program. While they offer educational programs to architects, the representative program helps train product representatives to take off the sales person hat and put on that of a partner who helps architects meet design objectives instead of making the quick sale – a definite benefit to the industry.

Professional associations also provide extensive volunteer opportunities, which can expand members' knowledge on everything from how to run your business to new technologies. Volunteer members throughout the world help IESNA achieve their mission of improving the state of lighting to benefit both the profession and the public.

"Our membership consists of lighting experts who pride themselves on being a resource and many of whom contribute to our more than 70 technical committees," said IESNA's Executive Vice President Bill Hanley. "We're here as a resource to the design and construction community. If you want to know about standard practices, ANSI standards and current issues from dark sky issues to recycling, we're the ones."

The AISC provides as similar benefit to architects searching for information on steel construction. The AISC is dedicated to working

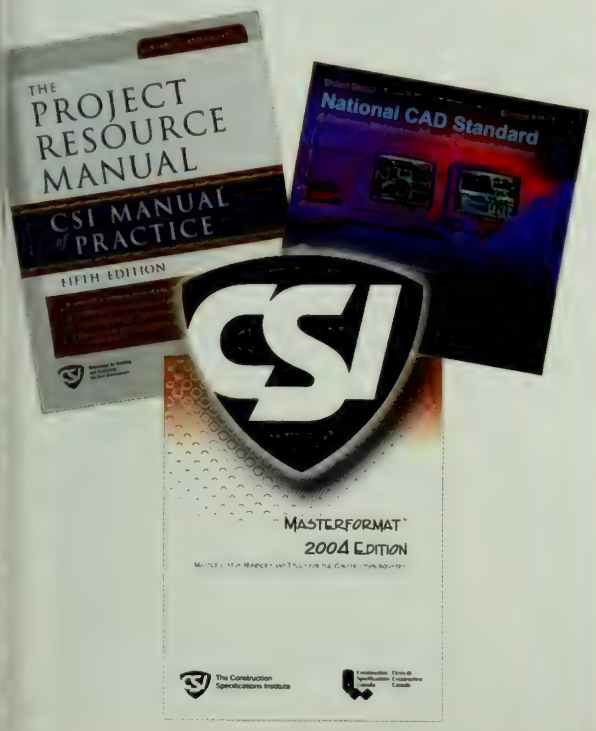
DESIGN. BUILD. MANAGE. SMARTER.

CSI Membership





The Construction Specifications Institute (CSI) is the organization behind *MasterFormat™ 2004 Edition, The Project Resource Manual — CSI Manual of Practice, the National CAD Standard Version 3.1, OmniClass*, The Annual CSI Show™ & Convention, The Product Representative Academy, The Contract Administration Academy and other products and programs that are changing the way you do business. Be a part it — join CSI!



There's no question that joining a professional organization is key to career advancement. CSI membership can help make you a recognized leader in your field through:

- Networking opportunities
- Professional development — Receive member discounts on CSI certification programs and a wide range of education programs
- *Construction Specifier* magazine — Stay informed with the latest industry news and in-depth technical articles
- Leadership development, education, and local networking through chapter participation
- Professional recognition — CSI acknowledges excellence through its prestigious honors and awards program
- The Annual CSI Show™ & Convention — Receive discounted access to this industry forum known for its education programs and networking opportunities
- CSI's Career Center — Find employers or employees with our online resume-matching service

Join today by visiting us online at www.csinet.org/joincsi

The Construction Specifications Institute / 99 Canal Center Plaza, Suite 300 / Alexandria, VA 22314

CIRCLE 67 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/ 800-689-2900 / 703-684-0465 Fax

CSI national membership dues are increasing July 1 — save money, join now!

with designers, contractors and owners to increase the ease and efficiency with which structural steel is used for buildings and bridges. AISC's membership includes nearly 10,000 designers and more than 600 steel fabricators, steel mills, and steel service centers.

In addition to producing a number of critical specifications and codes, including the Specification for Steel Buildings and the Code of Standard Practice, AISC offers architects a number of resources, including continuing education, publications, competitions, and discounts and other programs for architectural students. AISC offers both printed and in-person continuing education. In fact, AISC regional engineers will hold a lunch-and-learn in an architect's office at no charge with topics ranging from fire protection to sustainability.

A key resource is AISC's Steel Solutions Center. Architects in the preliminary stages of designing a structure can contact the center and receive a "conceptual solution," which includes basic layouts as well as cost and scheduling information. The Steel Solutions Center is also available to answer all technical questions. Architects can reach the center by calling toll-free 866.ask.aisc or by emailing solutions@aisc.org.

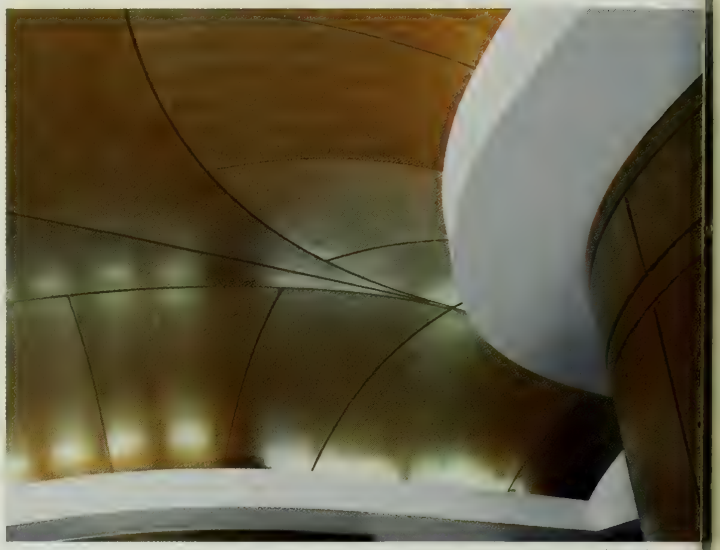
On average, professional associations allocate one of every four dollars they spend to member education and training and public information activities. This accounts for $3.6 billion per year, or about 18 percent of the average association's budget. Take, for example, this article. Architects seeking Continuing Education credits from the AIA can earn one AIA/CES Learning Unit by reading this article, answering the related questions and filing their answers. Complete instructions are on page 180.

Additionally, association members spend in excess of $10 billion annually to participate in these education programs, which can include everything from national conferences and online information to association newsletters and specialty meetings.

Photo Courtesy of AWI Institute

Professional associations provide extensive volunteer opportunities, which can expand member's knowledge on everything from how to run your business to new technologies.





AWI offers designers its internationally-recognized Quality Certification Program (QCP), which certifies woodworking firms that demonstrate consistent adherence to quality standards.

Education is a key component of the ICC – with a new code to promote, education is a must. Formed in 1994 with the support of the AIA, the ICC and its diverse membership were charged with developing a single set of comprehensive and coordinated national model construction codes. They are dedicated to providing the right quality codes, standards and products for all concerned with the safety and performance of the built environment. The founders of the ICC are Building Officials and Code Administrators International, International Conference of Building Officials and Southern Building Code Congress International. These organizations previously developed three separate sets of model codes used throughout the United States. By 2000, a complete set of International Codes was available and the International Code Council became a consolidated organization in early 2003.

Architects and other design professionals make up almost 30 percent of the ICC, which offers code support services, code opinions and technical assistance from experienced staff engineers and architects. Members receive extensive professional development services including on-site training, institutes, continuing education units, symposiums, teleseminars and on-line training.

Recognizing leading ideas in their industries is a component of many professional associations. For example, each year the IESNA and ASLA host professional awards programs to recognize the best in their industry from around the globe.

Last year Michael Van Valkenburgh Associates, Inc., New York, NY, beat out more than 600 competitors to take home a coveted Design Award of Merit from the ASLA for Feral Geometry: A Narrative of Modern Materials on the Bank of Turtle Creek in Dallas, Texas.

"The ASLA provides a great information stream, from project announcements to national news affecting the profession," said Michael Van Valkenburgh, an ASLA member since 1981. "One of the most important things the association has done is make architects aware of when to incorporate landscape architects into projects – and that's early. There is more understanding now of the benefits of incorporating a professional early in the design process to garner the best results, especially in complex urban projects," he said.

But urban projects aren't the only ones getting attention. U.S. homeowners are spending more on their environments. The National

DBIA:

"We Teach How"



With Educational Programs, Advocacy, Publications

"Integrated services delivery, whether designer- or contractor-led, is critical in ensuring quality, creative intent, and fiscal accountability to the client. Join me in embracing the design-build initiative through leadership in DBIA."

—Harold Adams FAIA, DBIA
2005 Chairman of DBIA
AIA National Board of Directors
Chairman Emeritus: RTKL & Associates

Mentorship Programs, Conferences and Industry Outreach.

Join the Design-Build Institute of America today and start defining your future in the A/E/C industry

www.DBIA.org 202-682-0110

CIRCLE 68 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

DBIA
DESIGN-BUILD INSTITUTE OF AMERICA

The two top priorities for ASLA as identified by its Board of Trustees are government affairs advocacy and raising the visibility of the profession.



ASLA 2004 award recipient, Feral Geometry, Dallas, TX, by Michael Van Valkenburgh Associates, Inc., photo by Carolyn Brown. A series of lawn steps extend from the house, a site of transition from interior to an exterior area of horizontal expansion.

Gardening Association reported that in 2004, homeowners spent an estimated $38.4 billion on their yards, up from $22.5 billion five years earlier. This new spending trend garnered a two-page article in an April edition of the *Wall Street Journal*, which also featured varied winning projects from landscape architects around the country and input from the ASLA. Such public relations activities that promote the profession are a key contribution of professional associations.

In New York next year? In celebration of its centennial, the IESNA is sponsoring an exhibit at the Museum of the City of New York. The exhibit entitled "Transformed by Light: the New York Night," will open on January 8, 2006, in conjunction with its Centennial Conference, and will emphasize the influence of light on society, focusing, in particular, on the changes to urban culture brought about by the production of light.

While professional associations spend about three times more on education programs than they do on direct lobbying of government, lobbying efforts play an essential role for many professional associations.

Think back 20 years. What did "Green Design" mean? And what was your accessibility plan for that office project? Thanks to the many design and construction associations and their dedicated members, architects now have a method of working with groups like the U.S. Green Building Council, which certifies "green" projects and the Americans with Disabilities Act, which ensures that all Americans have broader access to offices, housing, entertainment and public spaces.

The following are current governmental interests of the AIA, which has a number of member-organized groups supporting their efforts:

- Sustainable, healthy, livable communities.
- New incentives for affordable housing, green buildings, historic preservation and Brownfield renewal.
- Energy and water conservation.
- Better, safer schools and civic spaces.
- Affordable health insurance for small businesses.
- Liability laws that minimize lawsuit abuse.
- Reduced permitting delays.
- Clear building codes and accessibility guidelines.
- Sound licensing regulations.

According to Ann Looper, ASLA Director of Public Relations & Resource Development, the two top priorities for ASLA as identified by its Board of Trustees are government affairs advocacy and raising the visibility of the profession.

At the federal government affairs level, top issues for the ASLA include:

- Support for directives and funding to replace existing makeshift building and monument security devices with comprehensive, well-designed solutions.
- Funding for the Historic American Landscapes Survey (HALS).
- Increased funding for environmental, planning, and transit initiatives in the surface transportation reauthorization.
- A new Safe Routes to School program.
- Various initiatives providing more efficient use of water supplies and stormwater infrastructure improvements.

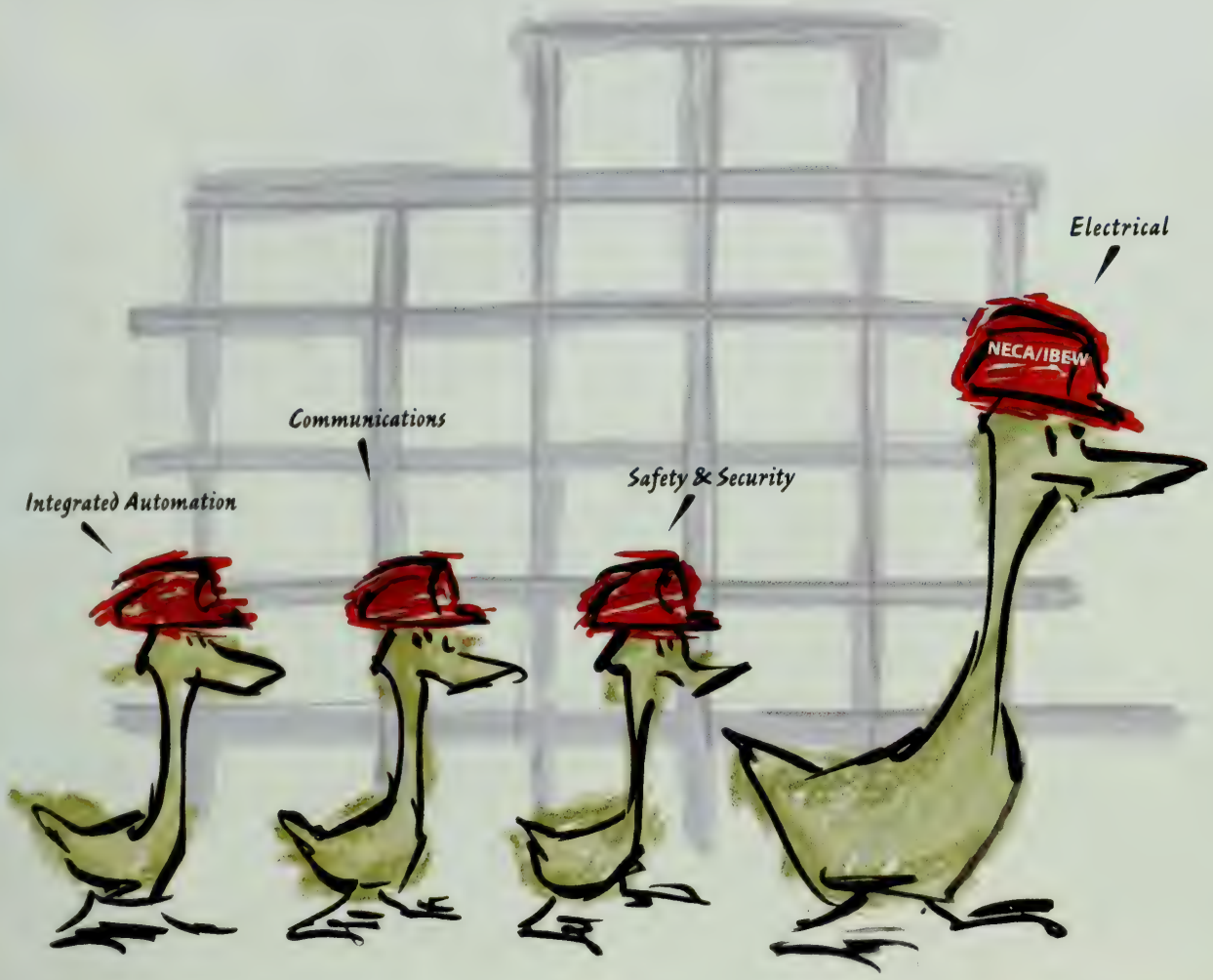
At the state level, ASLA has promoted the 50 by 2010 Licensure Campaign for the past four years to establish practice act licensure in every state and the District of Columbia by the year 2010. In 47 states, the term *landscape architect* can apply only to someone who is licensed. The association is pushing for 50.

Most professional associations have similar government agendas, which can be accessed via their web sites.

Manufacturing associations

Manufacturing associations have many similarities to both trade and professional organizations in their drive for education and government advocacy. They are typically a consortium of manufacturers who are dedicated to raising the visibility of their industry and establishing consensus programs to improve overall quality. The Schaumburg, Ill.-based American Architectural Manufacturers Association (AAMA), the Architectural Woodwork Institute (AWI) of Reston, Va., the Cedar Shake & Shingle Bureau (CSSB) of Sumas, Wash., and the Metal Construction Association (MCA) of Glenview, Ill., are just a few of the manufacturing associations that provide, most often at no cost, product-based information to architects.

That's what CSSB provides architects. According to Lynne



Keep Your Ducks in a Row

Hire a NECA/IBEW contractor to lead your wiring and cabling work

The new MasterFormat breaks up the old Division 16 electrical category into five different categories. That could mean five different contractors on your job site to install power equipment, communications wiring, safety and security systems, and so on. Things could get crowded. Confusing. And costly. Now more than ever, you need NECA/IBEW experience and know-how on your job site. Hire a NECA/IBEW contractor to coordinate *all* your electrical work, and keep things moving right along.

A COMMITMENT • THE QUALITY CONNECTION TO EXCELLENCE

CIRCLE 69 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

www.thequalityconnection.org



In today's fast-paced, competitive design and construction industry, success is often a matter of access to the right information at the right time. The Steel Solutions Center makes it easy for you to explore traditional and innovative solutions enabling you to find, compare, select and specify the right system for your project. From typical framing studies to total structural systems, including project costs and schedules, we can provide you with up-to-date information for your next project – **FOR FREE!**

The Steel Solutions Center can help you visualize your project in steel – call 866.ASK.AISC or e-mail **solutions@aisc.org**.

For a sample of what The Steel Solutions Center can do for you, visit **www.aisc.org/solutions**.

Steel
SolutionsCenter
Your connection to
ideas + answers

CIRCLE 70 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ICC is Proud to Serve Architects

ICC's mission is to provide the highest quality codes, standards, products and services. It is our pleasure to offer architectural and design professionals:



QUALITY PRODUCTS
The latest code requirements
Handbooks, commentaries and study tools
Easy-to-use field references

EXPERT TECHNICAL ADVICE
Plan Review Service
Code Opinions
Online bulletin boards

MEMBERSHIP BENEFITS
Special discounts
Networking
Code news and industry updates

PROFESSIONAL DEVELOPMENT
Training and Education
Certification



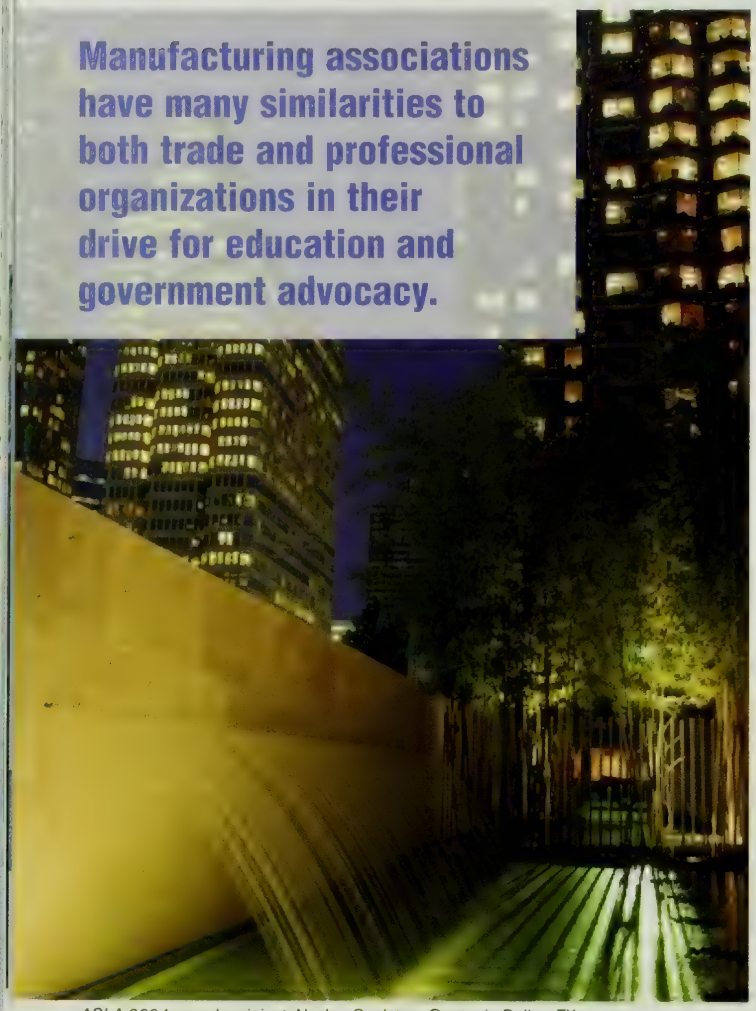
Earn CEUs/LUs*

*CEU recognition pending from state licensing boards.
For continuing education information, go to www.iccsafe.org/training/ceu or call 1-888-ICC-SAFE, ext 5260

For more information, please call 1-888-ICC-SAFE (422-7233) or visit www.iccsafe.org/aia

ICC
INTERNATIONAL CODE COUNCIL
People Helping People Build a Safer World

Manufacturing associations have many similarities to both trade and professional organizations in their drive for education and government advocacy.



ASLA 2004 award recipient, Nasher Sculpture Center in Dallas, TX, the garden wall fountain at night. (Photo: Tim Wight - Peter Walker & Partners)

Christiansen, CSSB Director of Operations, CSSB is a non-profit association that promotes Certi-label™ cedar shake and shingle roofing and sidewall products through their network of over 400 member manufacturers, distributors, wholesalers, brokers, retailers, associates and approved installers. "Architects can access an entire range of cedar shake and shingle information from our printed literature, educational credit seminars, and online. Even the most unusual questions are welcomed and addressed by field staff with over 100 years of combined experience."

The CSSB has been instrumental in writing and updating grading rules and technical manuals for the industry, encouraging its use in such projects as Camp David, and the Antietam National Battlefield. It functions as the industry champion for State legislative issues, city ordinances and homeowner association issues concerning cedar shake and shingle roofing and siding.

Getting the word out through education is essential to AAMA as well. With almost 70 years of industry experience and an estimated 66 percent of residential products certified through the 43-year-old Gold Label Certification Program, AAMA provides technical expertise and product performance for the residential and commercial fenestration industry. Available on the organization's web site, aamanet.org, its Gold Label Certification Program is fundamental in comparing product performance and determining appropriate product specification based on local code requirements.

Like many associations, the AAMA is broadening its membership to include architects. While membership provides discounts on more than 200 AAMA documents and access to various industry communications, AAMA is dedicated to providing education to all, member or no. Free online courses are available on a dedicated AIA/CES web page within the "architect" section of the association's web site. Currently there are three courses available with at least two more expected this year.

For more than 50 years, the AWI has kept the design community informed by standards setting, the training of design professionals and woodwork manufacturers, and the marketing of members' products and services to potential business partners. About 10 years ago, an Affiliate Membership classification for design professionals was created. Modest membership dues offer a cost-effective way for architects and interior design professionals to become better acquainted with advances in architectural woodwork. Today, AWI counts thousands of Affiliates among its membership.

If one product has defined the growth of AWI it is the *Quality Standards Illustrated (QSI)*. Since its initial appearance in 1961, the Quality Standards Manual, now in its eighth edition, has become a standard reference guide, recognized by architects, designers and specifiers as the authoritative source on fine architectural woodwork. Working with the Architectural Woodwork Manufacturers Association of Canada (AWMAC), the latest edition was introduced as a unified North American Standards in 2003.

AWI offers designers its internationally-recognized Quality Certification Program (QCP), that certifies woodworking firms that demonstrate consistent adherence to quality standards. Certified firms are tested and inspected by industry professionals on their ability to fabricate, finish and install projects according to the *Quality Standards Illustrated*.

According to AWI Executive Vice President Judith Durham, nearly every General Services Administration project incorporated the QSI and member work. One of the latest projects is the Prettyman addition to the Federal Courthouse in Washington, D.C. This project is a collaboration of three AWI member firms involving millions of dollars of fine woodworking. Over the years, AWI members have helped renovate the White House, the Library of Congress, and dozens of state houses across the country.

Promoting the use of metal roofing through education is the key objective of the MCA, whose members' include producers and manufacturers of metal roof and well products, as well as suppliers who produce accessories and raw materials. The MCA has numerous AIA-certified continuing education programs and technical resources on its web site, and its members work with code bodies to provide accurate information on sustainability and applications, and to correct discrepancies. For example, few know that virtually all of MCA's metal products are 100 percent recyclable and have a minimum of 25 percent recycled content.

According to MCA's Director of Marketing Steven Collins, MCA has launched a marketing and educational program entitled "The Metal Initiative." This is a coalition of metal related companies and other associations who have banned together to expand the use of metal in construction.

This consortium also supports MCA's Metal Roofing Certification Program, which is designed to promote widespread use of appropriate metal roofing products that have met designated quality standards. Design professionals and contractors are now able to clearly differentiate quality levels of steep slope metal roofing by applying industry performance standards and identifying the most appropriate metal roofing products for specific needs.■



Scheherazade Travertine, New Mexico

A real slice *of* nature.

If natural stone was part of the produce family, they'd probably call it organic.

No chemicals. No additives. No laboratory-induced processing. Just the way nature created it millions of years ago.

Today, there's a new emphasis on the real thing, especially when it comes to the products we eat and the materials we use to build with.

Thanks to new sources of supply around the world and the sophisticated technology that gets it out of the ground and to the fabricator at less cost; beautiful, versatile, affordable natural stone is the natural choice in every phase of residential, institutional and commercial construction.

At the Marble Institute of America, we're dedicated to helping architects, designers and contractors to understand how they can effectively use nature's oldest building material in their projects now and in the future.

That's why we're offering our popular *Dimension Stone Design Manual VI*, acclaimed around the world, to architects at a special price of $99. Available in print or on CD.

To get your copy call MIA at 440-250-9222.

MARBLE INSTITUTE of America

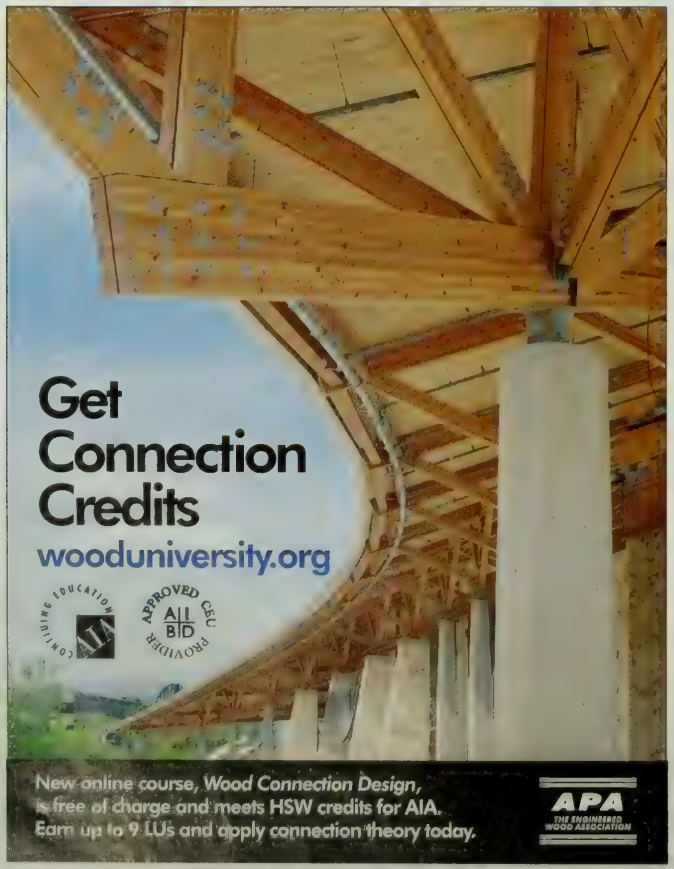
www.marble-institute.com

CIRCLE 72 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Using Association Resources

With more than 77,000 of them out there, how do you know which association is right for you? And do you have to join to get the information you want and need? Here are some questions to ask. Remember, many of the answers can be found on the associations' web sites.

1. Is it an educational opportunity for me? In a given year, how many conferences, seminars, and meetings does the association offer, and who attends?
2. Do my competitors belong to this association?
3. Does the association have something to do with my business?
4. What type is the association (Trade, Professional, Manufacturing)?
5. Do I want an association that is international, national, regional, statewide, or local in scope? Does the association have a local chapter?
6. How is the association managed (association management company, paid staff, volunteers, etc.)?
7. What are the dues and what is the total annual budget? How is it allocated?
8. Is the membership growing?
9. What is the association's reputation in my industry?
10. What information do they provide on a regular basis? What publications does the association produce? How often are they published?



CIRCLE 75 ON READER SERVICE CARD
OR GO TO WWW.LEADNET.COM/PUBS/MHAR.HTML

Promote Your Products

Order *Architectural Record* Reprints and Photocopy Permissions



REPRINTS
Custom Reprints: Minimum order 1,000
Contact: Michael Shober
Phone: 800-360-5549 ext.129
Email: architecturalrecord@reprintbuyer.com

BLACK & WHITE PHOTOCOPIES*
Contact: Copyright Clearance Center
Phone: 978-750-8400
Fax: 978-750-4470
Web address: www.copyright.com

* Please note that the maximum number of copies granted for commercial use is 500. Schools may obtain permission to make up to 1,000 copies for classroom use.

connecting people_projects_products

McGraw-Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications
Find us online at www.construction.com
The McGraw-Hill Companies

PRESCRIBE TERRAZZO



Nonporous and mold-resistant terrazzo is a healthy choice—the finish does not support microbes and moisture won't accumulate. Terrazzo is cleaned without harsh chemicals and the life expectancy will match the building structure.
Terrazzo — a floor that truly performs!

Contact us at: 1.800.323.9736

or visit us at: WWW.NTMA.COM

Terrazzo
A PERFORMING ART

Job Name: Cardinal Glennon Hospital
Location: St. Louis, Missouri
Architect: Archimages

LEARN MORE! READ ABOUT TERRAZZO AND THE NTMA IN THIS ISSUE'S CONTINUING EDUCATION ARTICLE.

CIRCLE 73 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at: http://archrecord.construction.com/resources/conteduc/archives/0506associations-1.asp

To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, contact Marissa Wyss at *Architectural Record*, (212) 904-2838 or e-mail marissa_wyss@mcgraw-hill.com The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Know the difference between trade, professional and manufacturing associations*
- *Understand the value of associations to the profession*
- *Understand how to utilize association resources*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 226. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. What association did AIA support the foundation of in 1994 to create a common construction code?
- **a.** American Architectural Manufacturers Association
- **b.** Construction Specifications Institute
- **c.** International Code Council

2. What are the top priorities for most associations?
- **a.** Conducting industry research
- **b.** Communicating best practices
- **c.** Disseminating product information
- **d.** Providing continuing education
- **e.** All of the above

3. According to the American Society of Association Executives 25 percent of associations' budgets are spent on what?
- **a.** Government lobbies
- **b.** Administrative duties
- **c.** Member education and training and public information activities
- **d.** Volunteer activities

4. Information provided by associations is usually very costly to attain.
- **a.** True
- **b.** False

5. In how many states can the term *"landscape architect"* only be used by someone who is licensed?
- **a.** 29
- **b.** 47
- **c.** 50

6. Associations are not required to pay taxes.
- **a.** True
- **b.** False

7. Traditionally, what associations are considered the originating source for codes of ethics and professional and safety standards that govern a variety of professions.
- **a.** Trade
- **b.** Professional
- **c.** Manufacturing

8. What has become the top communication technology for associations?
- **a.** Print newsletters
- **b.** Web sites
- **c.** Annual meetings

9. You must be a member to receive information from associations.
- **a.** True
- **b.** False

10. What is the fundamental common interest for professional associations?
- **a.** Making money
- **b.** Creating standards
- **c.** Advancing professional knowledge

Quality demands a formal audit.



Certi-label™ cedar shake and shingle manufacturers undergo third party inspections PLUS a second level of quality assurance by our own Cedar Quality Auditor.

Certi-label™ products have been tested to meet these recognized standards:

- **Class A, B and C fire-resistance**
- **UL 2218 Class 3 & 4 impact resistance**
- **UL 1897 (fourth edition) wind uplift**

Cedar Shake & Shingle Bureau

tel: **604-820-7700** fax: **604-820-0266** **www.cedarbureau.org**

Certi-label™ products. Always tailor made.

CIRCLE 74 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Guide to Association Resources

	Type	Affinity Partner discounts on products and services	Award Program	Career Center/Member discount for posting resumes or jobs	Continuing Education	Directory	Educational Programs	Forms/Contracts	Government Lobby	Industry Research	Library & Archives	Licensure Advocacy	Local and State Chapters	Mentoring Program	Newsletter/Journal	Public Relations	Professional Designation	Professional Interest Groups	Publications and Resources	Self-Study materials	Student Chapters	Standards/Certification	Surveys	Technical Information
American Institute of Architects (AIA) AIA.org	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
American Institute of Steel Construction (AISC) AISC.org	○		○	○	○	○	○			○	○								○	○		○	○	○
American Society of Landscape Architects (ASLA) ASLA.org	○	○	○	○	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○		○	○
Construction Specifiers Institute (CSI) CSInet.org	○	○	○	○	○	○	○	○		○	○		○	○	○	○	○	○	○	○		○	○	○
Design-Build Institute of America (DBIA) DBIA.org	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Illuminating Engineering Society of North America (IESNA) IESNA.org	○	○	○		○	○	○				○		○		○	○		○	○	○	○			○
International Code Council (ICC) ICCsafe.org	○	○	○	○	○		○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○	○
Engineered Wood Association (APA) APAWOOD.org	○					○	○								○									
Marble Institute of America (MIA) Marble-institute.org or usenaturalstone.com	○	○	○		○	○	○	○		○	○	○			○	○			○	○		○	○	○
National Electrical Contractors Association and the International Brotherhood of Electrical Workers (NECA-IBEW) NECA-NEIS.org	○		○			○	○	○	○	○	○		○		○	○			○			○		○
National Terrazzo & Mosaic Association, Inc. (NTMA) NTMA.com	○		○		○	○	○			○						○			○			○		○
American Architectural Manufacturers Association (AAMA) AAMANET.org	○				○	○	○			○	○				○	○			○	○		○		○
Architectural Woodwork Institute (AWI) AWINET.org	○		○		○	○	○			○	○		○		○	○			○	○		○	○	○
Cedar Shake and Shingle Bureau Cedarbureau.org	○				○	○	○	○	○	○	○				○	○			○			○		○
Metal Construction Association (MCA) Metalconstruction.org	○		○		○	○	○			○					○	○			○			○	○	○

○ Professional ○ Trade ○ Manufacturing

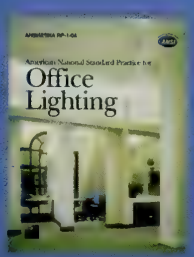
THE ILLUMINATING
ENGINEERING
SOCIETY OF
NORTH AMERICA

All you need to know about

LIGHTING

...and more







IES

To see the full array of IESNA lighting publications, visit the *Bookstore* at www.iesna.org.

You may order online or Fax: 212•248•5017/18 Phone: 212•248•5000 x112

CIRCLE 76 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/









from sand to glass to quiet

[and back again]

It is common knowledge that Ecophon acoustic ceilings provide the highest combination of sound absorption (up to 0.95 NRC) and recycled content (70% post-consumer) available.

However, perhaps you didn't know that Ecophon is part of Saint-Gobain Corporation, the world leader in glass manufacturing … and that Saint-Gobain probably manufactured many of the same bottles and jars that were later recycled to make Ecophon products … and that old Ecophon ceiling panels can be recycled into new Ecophon ceiling panels (though this is a rare occurrence as our products are designed to last the life of the building).

The point we're trying to make is that our commitment to the environment is comprehensive and multi-faceted. It impacts on our philosophy and informs every decision we make. It's one more reason why Ecophon is your best choice for acoustic ceiling solutions.

Ecophon®

877-258-7845 [toll free]
Ecophon CertainTeed, Inc.
145 Keystone Dr. , Montgomeryville, PA 18936
www.Ecophon-US.com

SAINT-GO
ECOPH

CIRCLE 77 ON READER SERVICE CARD OR GO

Interiors

Architects distill a Toronto art gallery from a brick shed, while form finds freedom at New York City firehouses

BRIEFS

The results of Pantone's annual color survey are rosy. Make that rose/beige. The national polling of 2,760 consumers found that more women than men would paint their house exteriors "sunshine" or rose/beige, and females preferred their interiors in risk-taking hues of lavender, beach glass, mauve mist, blush, and tender green. Men preferred more neutral shades. Younger respondents, age 18 to 20, preferred rooms awash in bold red and blue.

Students at the New York School of Interior Design took a decidedly architectural approach in their latest thesis projects. A highlight: Shi Ying Wu redesigned New York's Penn Station with skylights and courtyards to evoke the lost grandeur of the original McKim, Mead and White structure demolished in the 1960s, but in a Modernist idiom.

CONTENTS

186 New York City Firehouses
Prendergast Laurel Architects

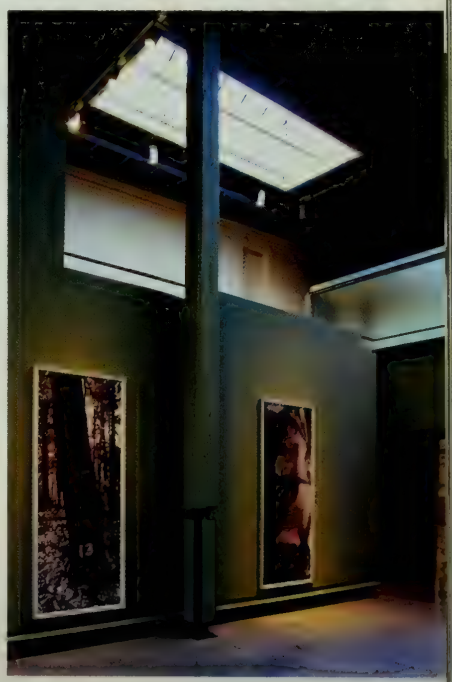
192 Corkin Shopland Gallery
Shim-Sutcliffe Architects

198 Product Design
Mary Bright Studio

203 Interior Products

The Distillery District: It has a nice ring to it, right? But Toronto's new urban-renewal zone is much more than a bar-hopper's paradise. Set on 13 downtown acres, the 40-plus buildings constitute the largest and best-preserved collection of Victorian industrial architecture in North America. Once a run-down bottling and manufacturing complex, the Distillery has recently morphed into a pedestrian-only village dedicated to arts, culture, and entertainment. Acclaimed art galleries, artists' live/work studios, restaurants, bars, and live music venues enliven this vibrant cultural center. This month, we visit one of the site's anchor projects, the Corkin Shopland Gallery (below), where Shim-Sutcliffe Architects transformed the 19th-century Pure Spirits Building into an equally spirited showcase for art.

Prendergast Laurel Architects faced unique live/work programs and an array of site conditions while extensively renovating five New York City firehouses, some dating from the 19th century. Though the tight-knit fraternity of firefighters had adapted to years of makeshift station renovations, this overdue overhaul has granted them clean-lined, Modernist interiors that provide plenty of room to relax and maneuver.



Most agree that if you draw the draperies, a room with a view seems to lose its luster. Or does it? In the case of curtains created by Mary Bright Studio, the vertical plane covering a window isn't merely a cloak of privacy, but an artful canvas capturing geometry and light. The interstitial veils between indoors and out, these window "treatments" are as rigorously engineered as the architectural interiors they complement. Mary Bright, the late designer who founded the curtain production studio in the 1980s, once famously designed a cocktail dress and matching hat incorporating Levolor blinds. Clearly, this was a woman peering through a window of subversive creativity. We recently visited the New York City studio's team of David Paskin and Erik Bruce to see how they are carrying on in the Bright tradition. Architects, especially, have come to count on the design/build house for tactile, collagelike curtains that turn fluid forms into essays of architectonic expression. Read on, and you may never feel the same way about drapery pleats again. *William Weathersby, Jr.*

With durable, modern materials, Prendergast Laurel forges deft renovations of **New York City Firehouses**

By William Weathersby, Jr.



At Ladder Company 25 on the Upper West Side of Manhattan, a cast-iron-and-brass stair banister was restored. New maple flooring became a standard material.

An essential part of New York City's civic infrastructure, the 220 fire stations spread across five boroughs encompass many architectural styles and construction techniques. Some facilities dating from the early-19th-century era of horse-drawn wagons were later adapted piecemeal for modern use, while many post-war buildings have undergone partial renovations over the decades. The condition of the interiors varies from site to site. "Some are beautiful wrecks," says architect David Prendergast, "and several are fine examples of historic architecture." While the members of many engine companies have craftily attempted to informally adapt their firehouses to changing lodging and equipment needs, he says, "These rundown environments have sometimes forced firefighters to live on-site almost like squatters."

Although the city's economic crisis of the 1970s brought capital improvements to a standstill—with long-lasting aftershocks—a decade ago the New York City Department of Design and Construction (DDC) collaborated with the Fire Department of New York (FDNY) on a plan to comprehensively renovate firehouses citywide. Instead of patching stations back together as a stop-gap, the authorities earmarked funds to begin top-to-bottom overhauls. In 1999, Prendergast Laurel Architects won one of the commissions to renovate five fire stations, three in Manhattan and two in Brooklyn, over a period of five years. The design team tackled Engine Companies 1, 93, 210, and 282, plus Ladder Company 25.

"The interiors of all five buildings were extremely deteriorated," Prendergast says, "while their exterior shells were repairable." Working with construction budgets that ranged from $2.4 to $5 million per firehouse, the architects restored street-facing facades, shored up building infrastructures, and fully renovated and reorganized interiors.

While the architectural pedigree and size (8,800 to 18,000 square feet) of each house varied, the program remained essentially the same. Each station accommodates upgraded dormlike sleeping areas, offices, communications stations, a kitchen, lounges, bathrooms, a gym, a garage, and equipment storage.

Aesthetically, many firefighters seemed to favor traditionalism, Prendergast observed. They preferred warm paneling, heavy and plump furniture, and mostly darkened rooms. (A reproduction Queen Anne table was drafted to support piles of reports in one fire-truck bay, for example, and the dorm windows of many houses were papered over with newsprint or garbage bags to keep sunlight out during daytime sleep shifts.) For this renovation cycle, however, "We worked with the DDC and FDNY to introduce a more Modernist kit-of-parts approach of architectural forms and finishes," Prendergast says. Because most interior spaces were to be gutted, the process provided the opportunity to streamline floor plans and create a consistent interior style from station to station.

Taking each structure back to its skeletal form was the major undertaking of each renovation. The process required shoring up or reframing the mostly brickwork facades (in some cases dismantling and reassembling them brick by brick), installing new steel-beam structural

The restored facade of Engine Company 1 (below) masks a new steel-beam infrastructure and overhauled interiors. The site's "house watch" command center (above) features sculptural steel cladding. A new kitchen (right) was a priority.







Glass-and-metal enclosures replaced plaster walls to allow light into Engine Company 282's core (above). Built-in wood cabinetry standardized the look of offices. The 282 house watch artfully combines steel and glass (below).

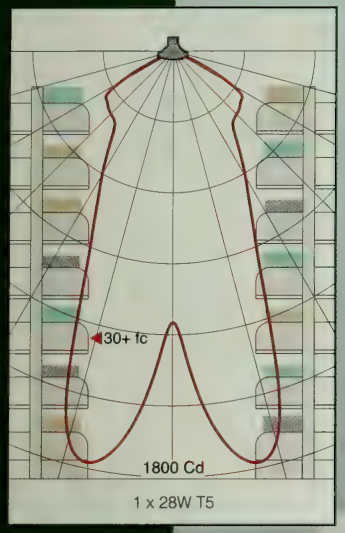


members, adding new central HVAC systems, and reinforcing new poured-concrete garage floors to support modern trucks and apparatus. Stripping away all worn and damaged finishes revealed each basic masonry structure. Then the architects exposed and refinished interior brick walls. They also revealed original structural ceilings, taking advantage of up to 17 feet of available ceiling height in some locations. Some significant architectural details were retained and showcased—such as a multifloor Victorian cast-iron staircase and ornamental terra-cotta medallions at Ladder Company 25 on the Upper West Side.

BIRCH MILLWORK, METAL-FRAMED GLASS WALLS, AND PERFORATED METAL CEILING PANELS HIGHLIGHT THE KIT OF PARTS.

To open up floor plans, new interior spaces are expressed as freestanding elements. Metal-framed storefront walls fitted with transparent and translucent glass allow daylight to penetrate from original windows into each station's core. Barnlike sliding wood doors can close off sleeping and lounge areas and also give firefighters a wide berth when quickly gearing up to head out to emergency calls.

A standardized palette of durable materials replaces aging plaster, wood, and vinyl surfaces. The new palette includes ground-faced concrete block, stainless-steel panels, maple and birch plywood millwork, and floating perforated-aluminum ceiling panels. New maple flooring



30+ footcandles vertical @ 30"



30 | 30 STACK LIGHT™

- uses a single 28W T5 lamp to drive light straight to the bottom shelves
- exceeds IESNA recommended light levels
- complies with ASHRAE/ IESNA Energy Standards
- meets California's stringent Title 24 energy code

LIGHTFAIR 2005 Best in Category Award Winner

elliptipar™

. . . there is no equal™

a Division of Sylvan R. Shemitz Designs, Inc.

203.931.4455

www.elliptipar.com

CIRCLE 78 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

© elliptipar 2005 Patents pending



Custom workstations at Ladder Company 25 feature maple millwork and translucent partitions (right). Without a furniture line item, the built-ins were part of the construction budget. Sliding doors front the reconfigured sleeping areas (below).



was installed on upper floors, while nonskid porcelain tile with the look of granite outfits new kitchens and bathrooms. In some instances, auxiliary outdoor space has been drafted to accommodate outdoor grills.

Freestanding furniture was not part of the renovation budgets, so Prendergast Laurel loaded generous built-ins into the construction funding. Custom workstations in the offices feature handsome birch plywood cabinets and cubicles. Streamlined bookcases and banquettes outfit lounges and communications stations. Although a recent tour revealed that some firefighters have begun to bring back their treasured Barcaloungers, a palpable pride of place reigns at these five shining new stations. ■

Project: *Firehouses, New York City*
Architect: *Prendergast Laurel Architects—David W. Prendergast, Deborah Laurel, partners in charge; Christoph Harter, project architect; Chris Heintzen, Joe Polowczuk, Justin Deabreu, Tony Valadez, Stefan Trosdorf, Nazia Parvez, Tao Sule, Kara Mueller, Nancy Choi, project team*
Engineers: *Robert Silman Associates (structural); Atkinson Koven Feinberg (mechanical and electrical); Mottola Rini Engineers (mechanical and electrical)*

Sources
Paints, stains: *Benjamin Moore; Hammerite*
Laminate: *Formica*
Solid surfacing: *Corian*
Light fixtures: *Delray*

For more information on this project, go to Interiors at **www.architecturalrecord.com**.



IF THE COLOR'S OUT THERE, WE CAN HELP YOU BRING IT IN.

At Sherwin-Williams, we make the world your palette. Not only do we offer our extensive COLOR system, we bring you Sher-Color™ – our faster, more accurate computerized color matching system. Sher-Color can duplicate almost any shade from anywhere and is consistent across all sheens. And with our Online Color Visualizer and Color to Go paint sampling system, you can show your clients exactly what to expect for added color confidence. So, remember, if you want precise color matching and limitless options, look no further than Sherwin-Williams. *To learn more, see your Sherwin-Williams Architectural Account Executive or call our Architect & Designer Answerline at 1-800-321-8194.*

SHERWIN WILLIAMS.

CIRCLE 79 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

illiams.com

Shim-Sutcliffe adapts a historic distillery to create Toronto's contemporary **Corkin Shopland Gallery**

By Barbara Dixon

It's rare when a contemporary art gallery ventures beyond the standard white box to address a varied curatorial mission; rarer still when its interior landscape adapts a historic landmark with a character as compelling as the art and photography on display. For the new home of the Corkin Shopland Gallery in Toronto, Shim-Sutcliffe Architects has gracefully carved a sculptural space from the heavy brick massing of a 19th-century distillery. Infused with daylight and a series of unfolding volumes, the gallery offers intriguing sight lines through a procession of rooms to heighten the art-viewing experience.

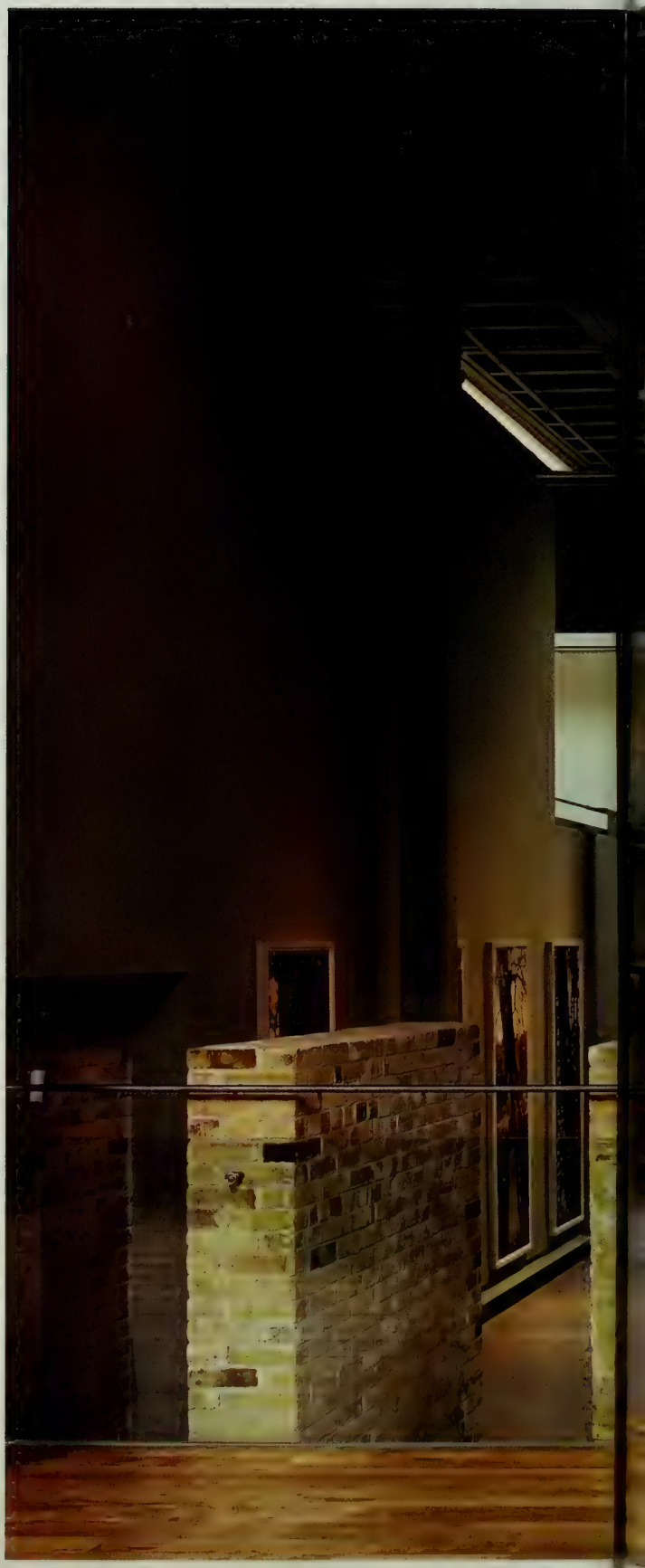
For more than 25 years, gallery co-owner Jane Corkin has showcased vintage art photography. She teamed with partner Martin Shopland to expand the gallery's focus, and now presents work by emerging artists as well as a wide range of decorative objects that date as far back as the 12th century. "The client's mandate was to create a range of spaces of different volumes to allow the greatest curatorial latitude possible," says principal architect Brigitte Shim.

Providing the frame for the gallery's far-reaching exhibitions, which can range from intimate photographs by Eugene Atget to large-scale mixed-media works by Robert Rauschenberg, is a 6,000-square-foot brick building in the city's booming Distillery District. In the past several years, the 16-acre downtown neighborhood has undergone a $20-million rehabilitation to become Toronto's premier arts and entertainment zone. The gallery's Pure Spirits Building was built in 1832 as a gristmill and later housed the immense vats of the Gooderham and Worts Distillery, the largest in the British Empire. For a time in the 1990s, the site became a popular sound stage for film production.

By removing a wood floor added by previous tenants, Shim and partner Howard Sutcliffe uncovered a network of long brick walls set 3 feet on center, which supported the vats used in the distilling process. "The brick piers were not structural elements of the building itself, but served as the 'scaffolding' for the 16-foot-tall vats," Shim says. "We removed most of them to create a vast, double-height main gallery space, but retained some on either side and in smaller spaces to honor the

Barbara Dixon is a Toronto writer and the acting editor in chief of MyHouse.

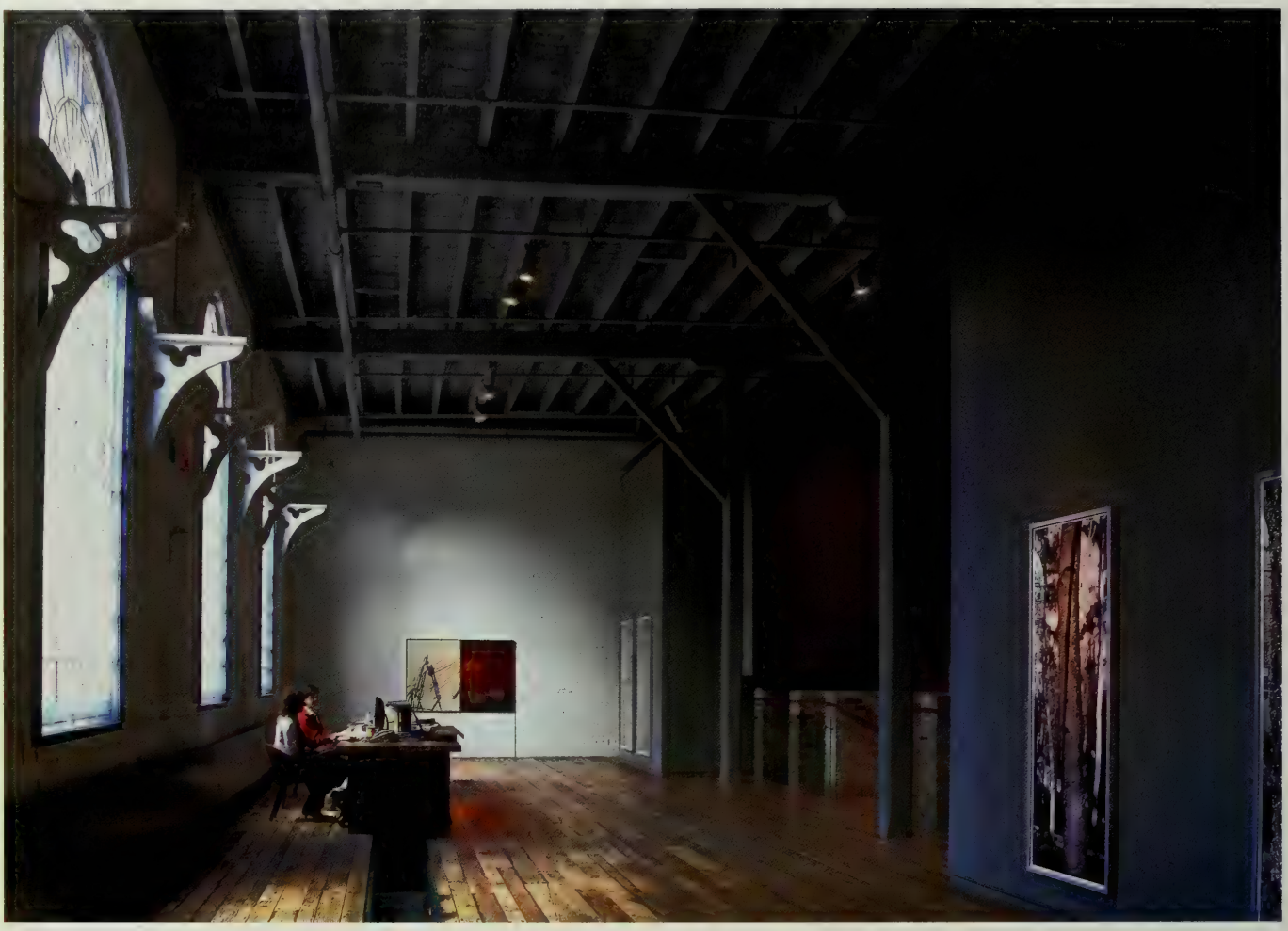
Project: *Corkin Shopland Gallery, Toronto*
Architects: *Shim-Sutcliffe Architects—Brigitte Shim, Howard Sutcliffe, principals; Denise Haradem, project architect; Betsy Williamson*
Project manager: *Eisner-Murray—Vic Furgiuele, project supervisor*
Engineers: *Blackwell Engineering (structural); Toews Engineering (mechanical); Dynamic Designs and Engineering (electrical)*
Consultants: *ERA Architects (heritage); Suzanne Powadiuk Design (lighting); Leber Rubes (code)*



PHOTOGRAPHY: © JAMES DOW



Viewed from the entry level, the cavernous main gallery retains some of the brick piers that once supported towering distillery vats. Poured concrete replaces a dirt floor.



The gallery's reception desk sits in front of three original Palladian windows (above). Old-growth wood flooring was removed, refurbished, and relaid. Restored skylights illuminate the upper-level galleries (right).

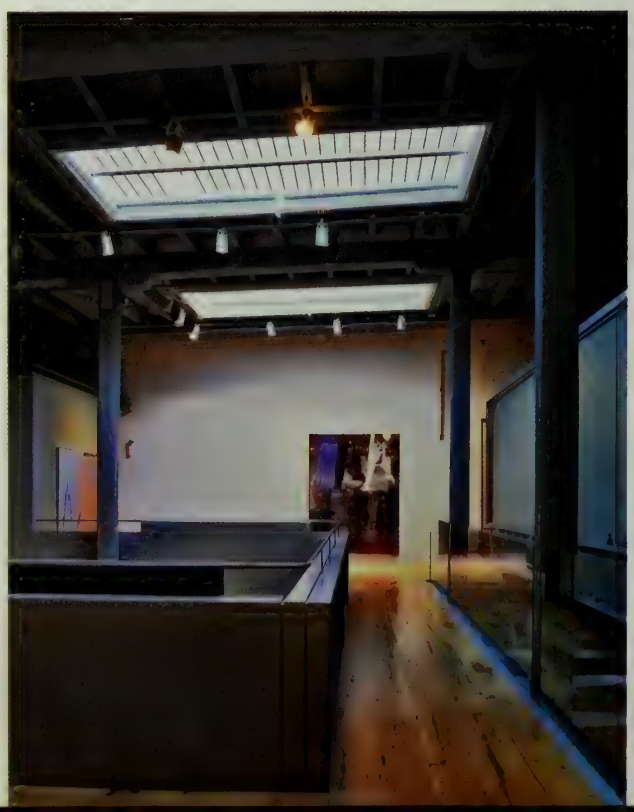
historic function of the building." Poured concrete replaced the existing dirt floor. The architects incised the concrete with outlines of the removed brick piers, a further pentimento of Pure Spirits.

The building envelope is landmarked, so the architects restored the existing brick walls, Palladian windows, and skylights. Old-growth pine and maple floorboards were removed, remilled, and reinstalled;

THE GALLERY BALANCES VAST SPACES WITH MORE INTIMATE CHAMBERS, ALL INFUSED WITH A SENSE OF HISTORY.

some of the wood became risers on new staircases. Existing structural wood columns are now supported by new metal bases, forming an intersection of old and new.

To create varied volumes within this big box, the architects designed a U-shaped enclosure to surround the 25-by-35-foot main gallery. The east and west walls are drywall painted a gray-green to complement both vibrant paintings and black-and-white photography on





Managing light and energy is the art of solar control. At MoMA, a Nysan® shading system transitions from a blackout shade to a 5% openness at the touch of a button while keeping the fabric stable and the reveal clean. For 80 years, architects and designers have turned to Hunter Douglas for innovative interior and exterior solar control.

Project: Museum of Modern Art, New York, NY
Architects: Yoshio Taniguchi and Associates and Kohn Pederson Fox Associates
Product: Nysan Motorized Skylight Shades

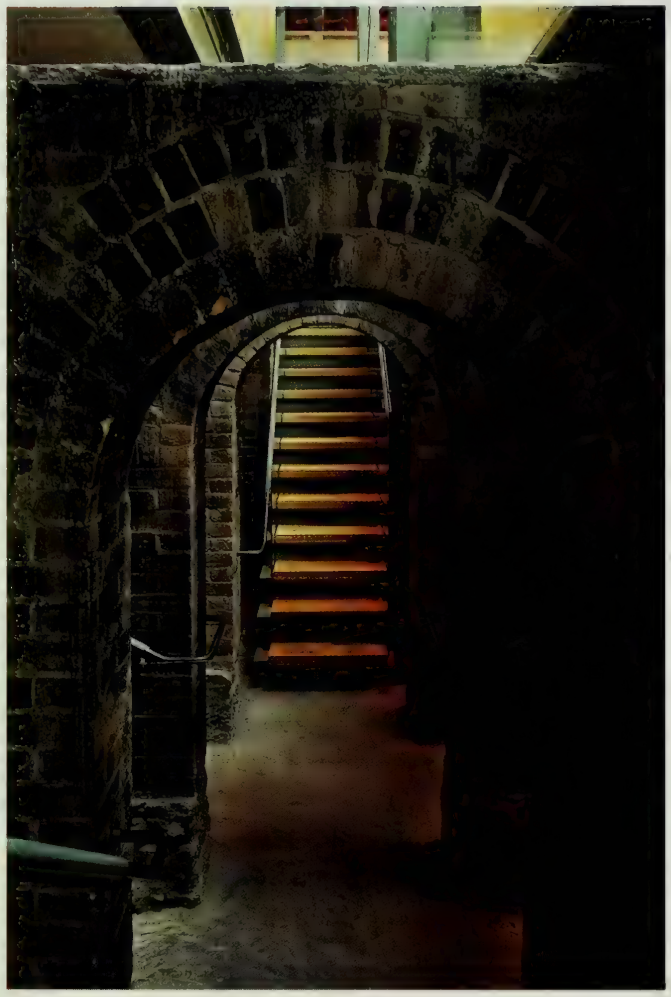
©2005 Hunter Douglas Inc. ® Trademark of Hunter Douglas Inc.

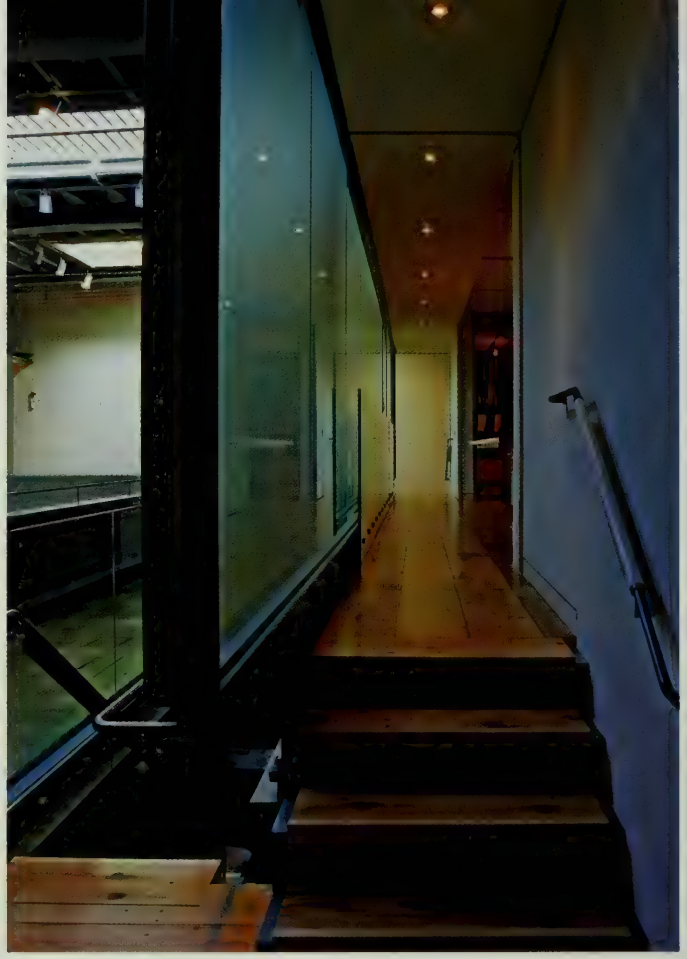
HunterDouglasContract

SOLAR CONTROL

For literature and our email newsletter, call toll-free 800-727-8953 or visit www.hunterdouglascontract.com

CIRCLE 147 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS





A new steel staircase with recycled wood treads is centered between massive brick archways to heighten the perspectival experience for gallerygoers (left). The hallway to the library (above) is a "backstage" zone.

display. The walls mask HVAC and electrical systems, and enclose private zones for back-of-house functions on the first and second levels. To reinforce the idea that these are new architectural forms dropped into a historic space, the walls are topped by metal channels and stop short 5 feet below the wood-framed ceiling.

South of the main gallery volume, patrons pass through intimate, brick-lined rooms that evoke the feeling of meandering through ancient catacombs. "This is the perfect place to display smaller-scale art or decorative pieces," Corkin says.

NEW ARCHITECTURAL FORMS OF STEEL AND GLASS CONTRAST WITH ORIGINAL BRICKWORK AND OLD-GROWTH WOOD.

Bracketing the smaller galleries are two steel-and-wood staircases, which are centered within the original brick archways. The mezzaninelike upper level on the building's southern edge contains a library filled with art and photography books. This loftlike room is fronted by a steel bridge that connects to galleries on either side. Sliding, sandblasted-glass panels can close off the library from the main gallery below; they also serve as a rear-projection screen for multimedia installations that can be viewed from the main floor.

"The gallery's design is about layers," Shim says. "When visitors first arrive, they think they see the entire gallery at once. Then the layered volumes begin to unfold, exposing intimate galleries beyond the main double-height room. From the vantage point of the entry platform, the steel bridge appears to be supported by the brick piers. As you move down the stairs onto the main level, it then appears to float in space." Both intimate and vast, the precise juxtapositions of scale and form have distilled a robust industrial space into a refined vessel for high art. ■

Sources

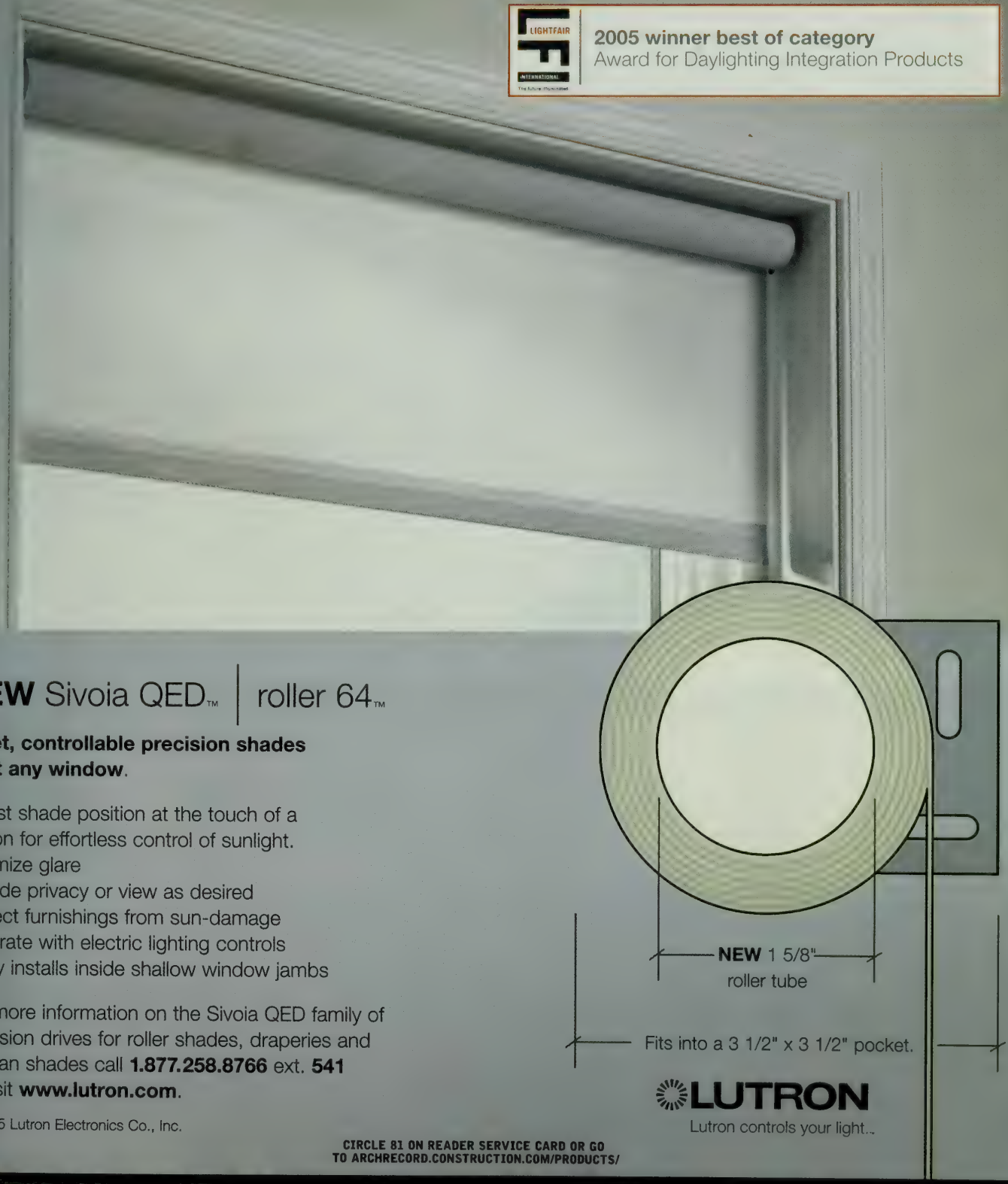
Wood floors: *Barwood Flooring*
Concrete floors: *Quality Marble and Stone*
Metalwork: *Khanadian Custom Metal Fabricators*
Ironwork: *Tremonte Manufacturing*
Millwork: *MCM 2001; Two Degrees North*
Masonry: *Vame Enterprises*
Doors, hardware: *Trilliam Architectural Products*
Paint: *Benjamin Moore*
Glazing: *European Glass and Mirror*

For more information on this project, go to Interiors at **www.architecturalrecord.com**.

small | quiet | precise | new

LIGHTFAIR INTERNATIONAL

2005 winner best of category
Award for Daylighting Integration Products



NEW Sivoia QED™ | roller 64™

Quiet, controllable precision shades to fit any window.

Adjust shade position at the touch of a button for effortless control of sunlight.
minimize glare
provide privacy or view as desired
protect furnishings from sun-damage
integrate with electric lighting controls
easily installs inside shallow window jambs

For more information on the Sivoia QED family of precision drives for roller shades, draperies and Roman shades call **1.877.258.8766** ext. **541** or visit **www.lutron.com**.

© 2005 Lutron Electronics Co., Inc.

LUTRON
Lutron controls your light...

CIRCLE 81 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





At the Manhattan restaurant called English Is Italian (formerly Tuscan Steak), overlapping sheer curtains hang from vertical strands of ball chain (above and left). Each curtain panel is double-sided, a different color on each side. In the Viñoly residence (opposite), box-pleated, diaphanous curtains cascade from a custom stainless-steel cable system. With parachute-like detailing, their fullness also masks cast-iron radiators.

Architectonic draperies by the **Mary Bright Studio** give new meaning to the phrase "curtain wall"

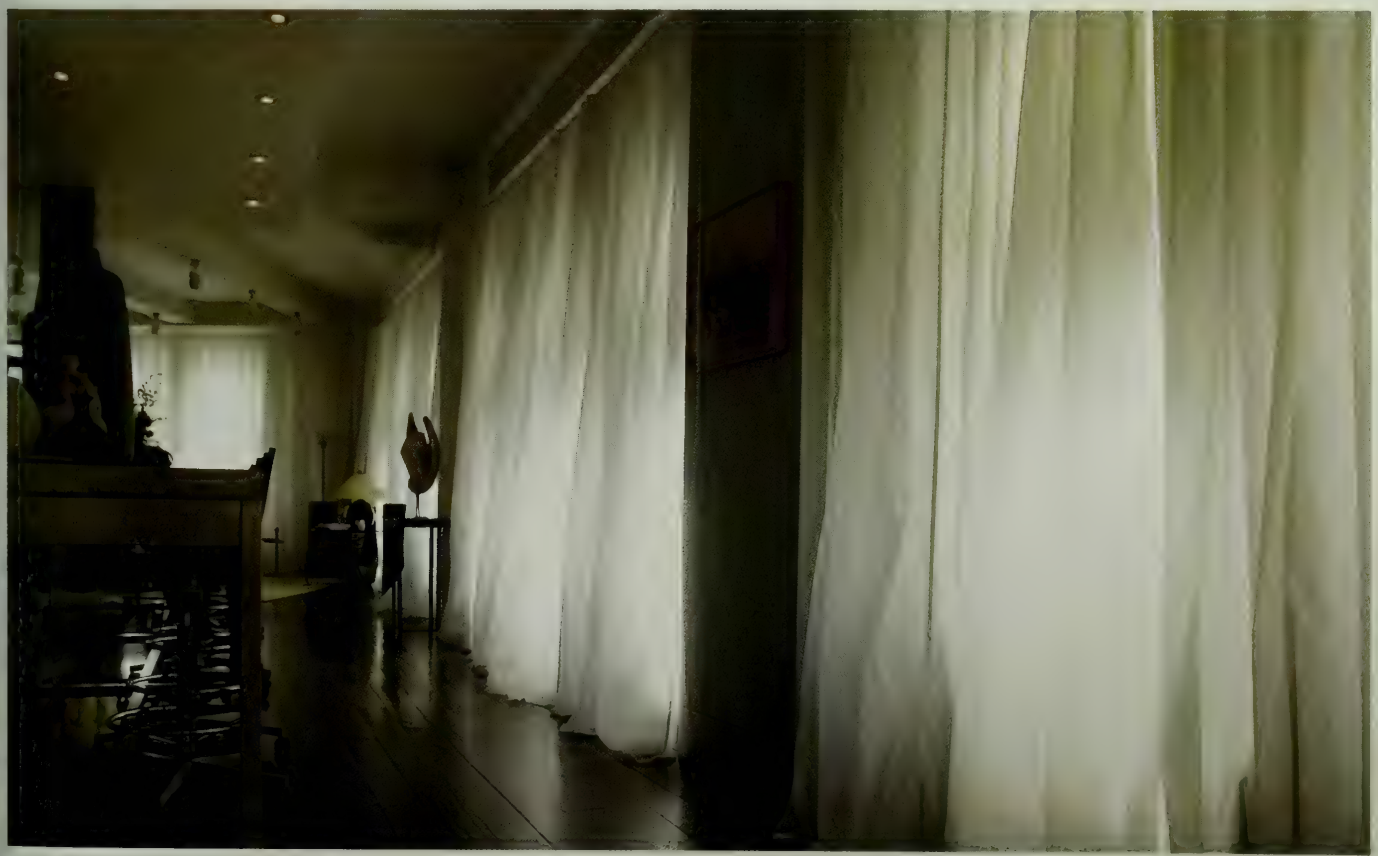
By William Weathersby, Jr.

I respect people who hate curtains," the late designer Mary Bright was fond of saying. She was probably counting among that crowd most architects, who have the notorious reputation of hating any hint of draped fabric clouding the view of their pristine curtain walls (particularly in architectural photographs—you know who you are). But before she died of cancer in November 2002 at the age of 48, Bright had turned the trade of curtain-making into an architectonic art. Shaping natural fabrics like linen and burlap—along with unorthodox materials such as corrugated paper, metal mesh, rubber, or leather—into layered screens or tailored folds, she employed drapery as a way to explore the edge between interior and exterior space.

Recalled fondly by many as a kind of madcap genius of window covering with a penchant for quips and comic mugging, the Edinburgh-born Bright began her eclectic New York career as a milliner in the East Village. After an initial invitation by interior designer Alan Buchsbaum to design a voluptuous 60-foot curtain for the loft of actress Ellen Barkin in 1983, she went on to build a roster of celebrity clients, such as Bette Miller and Lauren Bacall. Soon she was attracting architectural clients, including Smith-Miller + Hawkinson; Diller + Scofidio; Hanrahan Meyers; Christian Liaigre; and ARO. Museum of Modern Art curator Terry Riley, who hired Bright to design drapery panels for the 2001 Mies van der Rohe exhibition, cited her "poetry of building" and the beautiful outcome of her "strange and obsessive love" for tailoring.

Carrying on the designer's legacy today at Mary Bright Studio on Lower Broadway in Manhattan is her husband, principal David Paskin, collaborating with designer Erik Bruce. "Mary was an irreplaceable original," Bruce says. "She liked to say that sewing curtains was like swimming laps. There was a balance of grace and effort involved to cover great lengths. Yet artistically, she loved the notion of repetition."

Bruce, who has an MFA in theatrical production and began working with Bright in 1998, says the studio honors her notions of tailored details, among them hand-stitched seams, cascading folds of fabric, and cufflink-style hardware treatments. Yet don't call this curtain couture. "We're creating new work that still speaks in Mary's vocabulary," Bruce





For a MoMA exhibition, an original column from Mies's Barcelona Pavilion is set in front of a vibrant curtain masking a video viewing room (left). In an apartment in Richard Meier's Perry Street building, the drapery's horizontal bands create a clerestory effect (below.)

says, "but it's never been about drapery as a center-stage decorative statement in itself. It's a level of design that complements and interacts with the architect's own intent."

Architects seem to welcome the design team's deft ability to fashion soft materials into vertical surfaces that manipulate light and views while at the same time speak inwardly to the rooms they border. In an apartment designed for contemporary art collectors in one of Richard Meier's new Perry Street towers, for example, interior architect Steven Learner enlisted Bruce to create draperies that wrap windows on three sides. Though the views of the Hudson River are spectacular, the bright sunlight reflected off the water could have overwhelmed the living spaces at points during the day. With collagelike layering, the monochromatic draperies combine sheer fabric with horizontal bands of two opaque textiles set at varying heights. As one moves through the space, views and light are both obscured and revealed; the translucent sections function like clerestories translated to fabric. Drapery bands also align with textured bands that rim the space's structural columns, creating a dialogue.

For a downtown apartment Diana Viñoly designed for herself and her architect husband, Rafael, luminous veils of parachute cloth filter light into the loft while seeming to melt into the white walls and ceiling. Billowing yet unfussy, the curtains are the the kind of calming detail that might actually keep one from ever wanting to pull them back.

"With many drapery companies, the 'design' is mainly in the fabric selection," notes Paskin, "worked up with standard patterns and details. We are a design/build shop that takes into account every element of the curtain to make it site-specific." Indeed, the team's discussion about attaching a drapery to a custom-forged rod can launch a litany of techniques involving grommets, clips, laminated rings, even twine. At Mary Bright Studio, the curtain still rises on windows with a point of view. ■



Project: *English Is Italian (formerly Tuscan Steak)*
Architect: *Jeffrey Beers International*

Project: *Viñoly Residence*
Designer: *Diana Viñoly*

Project: *Barcelona Video Theater, MoMA*
Designer: *Proun Studio*

Project: *Perry Street Residence*
Architect: *Steven Learner Studio*

Sources
Custom drapery design and fabrication: *Mary Bright Studio*
Fabrics: *Pollack Studio (English Is Italian); white nylon ripstop parachute cloth (Viñoly Residence); Knoll Textiles (Barcelona Video Theater); Bergamo; Rogers & Goffigon; Chapas Textiles for AM Collections (Perry Street Residence)*

For more information on these projects, go to Interiors at **www.architecturalrecord.com**.



PEOPLE WILL THINK YOU'RE A GENIUS FOR PUTTING ART ON THE CEILING.



If you're searching for ceiling options to make your project a thing of beauty, Simplex Ceilings' diverse selection of products can most certainly help you out. From airports to casinos, we've helped architects and contractors for over 50 years make their projects look even better than they imagined. By following the wave of design and manufacture of commodity and specialty acoustical metal ceilings, we offer a flexible variety of incredible-looking shapes, colours and finishes.

All to satisfy your architectural and design requirements regardless if the application is institutional, industrial or commercial.

So when it comes to designing your project's ceiling, and you want it to look as great as possible, contact Simplex Ceilings.

SIMPLEX CEILINGS
A DIVISION OF INTALITE INC.

CIRCLE 82 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

L FREE: 1 800 638-5726 THE NEW WAVE IN CEILINGS WWW.SIMPLEXCEILINGS.COM



LONNOVA UV

For inner space.
Award winning vinyl flooring with starlike spectra.
Dry-erase, easy care, UV cured urethane finish.

Silver Winner

Catch our latest innovations at
NEOCON

Chicago, IL
June 13-15 2005
Exhibit No. 8-8033

LonNova Moonlit # 295
Low maintenance, UV cured urethane finish.

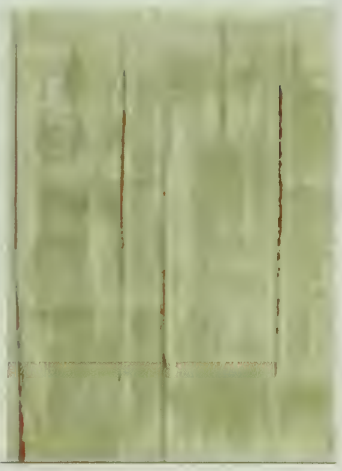
LONSEAL
FLOORING

PHONE 800 832 7111 • WWW.LONSEAL.COM

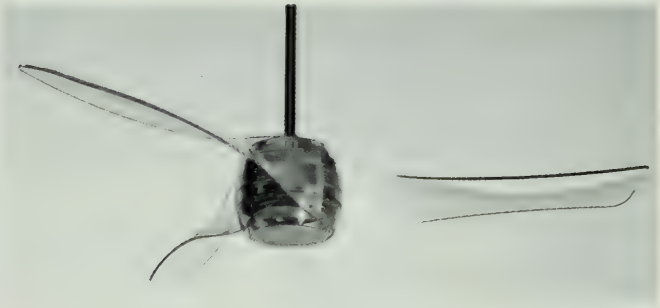
CIRCLE 83 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Interiors Products

► Plaster professionals



Jo LeSoine and a team of artisans run Real Illusions, a West Coast source for hand-applied architectural finishes. Offerings include Venetian plaster, gilding, museum-quality murals, and faux finishes. A vast library of samples are available on-site at the Venice studio, including a selection of original wall treatments such as Tapis, a Venetian plaster in the spirit of architect Carlo Scarpa. Shown here is Oriente finish, one of the studio's 2005 specialty finishes. Real Illusions, Venice, Calif. www.realillusionsinc.com **CIRCLE 200**



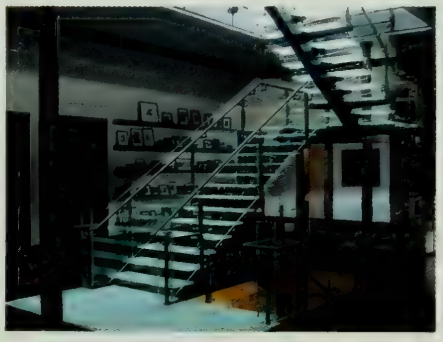
▲ Bodiless fan design

Artemis, the latest ceiling fan from G Squared Art, does not have a "body"—the blades themselves wrap around the motor. The blade pitch is designed with pronounced steep angles near the center of the fan, tapering off to a gentle slope at the blade tips. Featuring a halogen bulb, the fan comes in translucent, mahogany, maple, and pearl white finishes. A wall-mounted, radio-frequency remote control is included. G Squared Art, Avila Beach, Calif. www.g2art.com **CIRCLE 201**

▼ Presentation canvas

Mural is a highly flexible wall system designed to support a variety of presentation formats, including plasma screens, projection systems, videoconferencing cameras, sound systems, CPUs, and laptops. It also works well for simple dialogue presentations that use tackable surfaces, display/presentation shelves, whiteboards, and paper. Mural has a system of bases and thin, vertical structures that offer a range of configuration combinations. Nucraft, Grand Rapids, Mich. www.nucraft.com **CIRCLE 202**





▲ Light and airy stair

Mison Concepts recently completed this staircase for a three-story loft in New York City's Tribeca district. In order to allow the light from the loft's 400-square-foot skylight to penetrate all of the floors of the home, the client commissioned Mison Concepts to design a glass staircase that maintained the industrial feel of the space yet remained transparent and light. The three-story, single stringer, cantilevered stairs combined blackened stainless-steel hardware, a blackened steel structure, clear glass, and fritted glass to achieve the desired effect. Mison Concepts, Hicksville, N.Y. www.mison.com **CIRCLE 203**

► Flowing glass panels



Artwork in Architectural Glass (AAG) supplied cast-textured, colored, bent, and tempered glass panels for the new Titan Corporation headquarters in Annapolis Junction, Maryland. AAG's Rainfall and Waterwall textures were utilized in ⅜" blue and ⅜" green panels throughout the lobby. The tempered panels are nested together, one directly in front of the other, with alternating colors and textures to create a flowing water effect. Artwork in Architectural Glass, Newport Beach, Calif. www.aag-glass.com **CIRCLE 204**

► 20th-century fabrics



Maharam continues to explore textile designs of the early 20th century with Orakelblume (right) by Koloman Moser (1901) and Design 7208 by Josef Hoffmann (1909). The stylized daisies in Orakelblume illustrate Moser's talent for juxtaposing geometrical shapes with whimsical motifs. The 55"-wide cotton/rayon blends join a collection of reeditions from designers including Alexander Girard, George Nelson, and Verner Panton. Maharam, New York City. www.maharam.com **CIRCLE 205**

Interiors Products Category

▼ A twist in classroom furniture

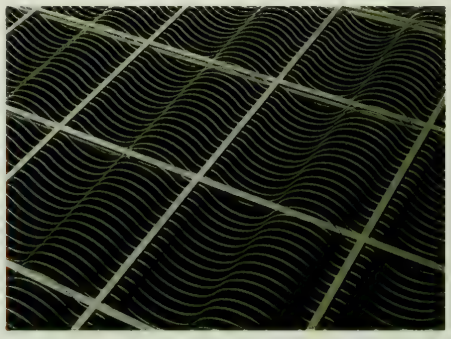
Recognizing the trend for instructors to use all four walls of a classroom, KI developed 360° classroom furniture, a new line of desks, tables, and chairs. Designed with students, teachers, and janitorial maintenance in mind, 360° improves space utilization and encourages teacher and student creativity. Often students strain to see their teacher; with 360°, the entire desk can rotate completely, enabling instruction from any point in the room. Students can set their seat height to their preference, and a seat swivel allows students to track the teacher throughout the room. The line's fully adjustable frames can be configured to accommodate young children to adults. KI, Green Bay, Wis. www.ki.com **CIRCLE 206**





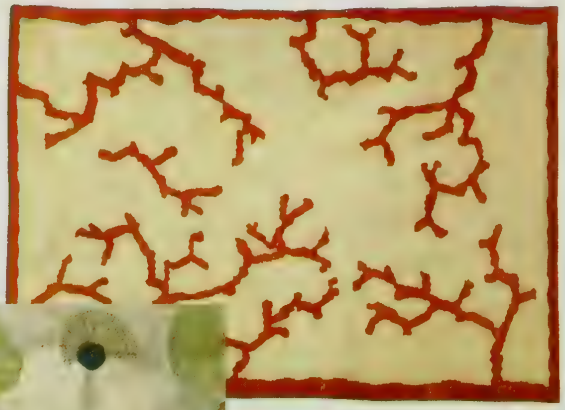
▲ Character-defining lines

Interception (left) and Bandwidth (right), designed by Kari Pei, are the newest additions to Wolf-Gordon's Suite Collection, a line of durable, Type II vinyl wall coverings 52" and 54" wide, respectively, appropriate for corporate, retail, and hospitality interiors. Bandwidth is a modern stripe inspired by Joseph Albers's color theory, available in 10 colorways that span saturated accents to soft neutrals. Interception, with its Tuscan-infused hues, uses scale to transform a large horizontal pattern into a three-dimensional vertical. Wolf-Gordon, Long Island City, N.Y. www.wolf-gordon.com **CIRCLE 207**



▲ Making waves

Wireworks Forms open-cell ceiling system is the latest in open-ceiling design from USG Interiors. Each panel is made from 3/16" curved steel, robotically welded into wave patterns. Effective in both new and retrofit applications, the panels can be installed either angled upward toward the ceiling or downward toward the floor. The panels are available in high-gloss, powder-coated finishes that are durable and abuse-resistant, as well as in custom colors. USG Interiors, Chicago. www.usg.com **CIRCLE 208**





▲ Inspired by nature

Founded in 2000 by master weaver and artist Joanna Michalowicz, Asha carpets are as much about texture as they are about design. The carpets celebrate contemporary design, while at the same time they honor the heritage of the antique carpet tradition. Asha's latest designs, Coral (above) and Poppies (left), demonstrate these signature features. Available in flat weave, hand-knotted, or Velaubu technique, Coral's organic pattern stretches from the rug's uneven border across a solid background. Poppies, a bold pattern reminiscent of sunrays, is available in seven colorways with or without a border, in either a flat weave or hand-knotted design. Asha Carpets, Brooklyn, N.Y. www.ashacarpets.com **CIRCLE 209**



◄ Ceilings with a conscience

Luxalon Architectural Products utilize more than 70 percent recycled content and minimize factory waste. The metal ceiling systems come in a variety of colors and styles—from linear metal to Open Cell, Planks and Tiles, acoustical baffles, and exterior soffit products—and have no off-gassing or negative effect on interior air quality. The rust-resistant panels are also nonporous, and therefore do not collect mold and mildew. Hunter Douglas, Norcross, Ga. www.hdceilings.com **CIRCLE 210**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Can you believe this ceiling is acoustically absorptive?



Visit our website and view over **50** custom installations

THE INTERNATIONAL LEADER IN DESIGN, ENGINEERING AND THE MANUFACTURING OF CUSTOM ACOUSTIC CEILINGS AND WALL PRODUCTS SINCE 1975

www.decoustics.com
1-800-387-3809
j-church@decoustics.com

decoustics

CIRCLE 84 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

SuperLite™ Solution.



Collins Gordon Bostwick Architects
Cleveland Clinic, Ohio
SuperLite II-XL / GPX 120-minute

fire glass

The SuperLite II-XL™/GPX™ 120-Minute Solution for Quiet, Safe Healing Spaces

- Reduce environmental noise up to 96%.
- Add see-through visibility for greater security.
- Increase natural light for enhanced human performance and well-being.
- Manage sunlight and solar heat with electronic tintability.
- Create beauty by etching, sandblasting, curving, or tinting the glass – virtually any custom architectural make-up is available.
- Add additional protections against bullets, blast, attack, hurricane or UV rays.
- SuperLite Solutions are available in fire ratings from 20-180 minutes.

USA MFG.

Your First Source for Fire Rated Glazing Solutions Since 1982

www.safti.com 888.653.3333

SAFTIFIRST

Products

Doors & Windows

To say that storm-resistant windows and doors were a hot topic at this year's Builder's Show is an understatement. Alongside other problem-solving introductions, such as an oversize venting picture window, were aisles of products intended to save money, property, and above all else, lives. *Rita Catinella Orrell*



A venting window, and storm-resistant and commercial door options

Marvin Windows and Doors showcased several noteworthy introductions at the International Builder's Show, held last January in Orlando. On the top of the list was the Venting Picture Window, a new product category that combines unobstructed views and cross ventilation. Marvin's exclusive design features a sash that projects 2¼" outward to reveal a screened-in opening that helps vent stagnant air, reduce condensation, and keep out insects. Made of fiberglass-wrapped reticulated foam that resists mold, mildew, and ultraviolet rays, the window's hidden screen surrounds the full perimeter when the window projects outward, allowing air to circulate without obstructing the view. From the outside, the window appears closed at all times, giving clients a sense of security when keeping windows open at night.

On the door side of the business, Marvin has added a line of swinging French doors to its StormPlus line for Impact Zone 3 and Impact Zone 4. The swinging French doors will be offered in rectangle, eyebrow, and half-round shapes, and are available to fit a new, standard 10' rough-opening height.

Marvin has entered the commercial market with a door designed to withstand heavy use, with sturdy, 4½" ball-bearing hinges and beveled meeting stiles to ensure long-term operation. The door meets ADA codes with a bottom-rail height of 11⅞", a net clear opening of 32", and a standard low-profile sill. It is sized to accommodate the nonresidential market with standard heights of 7' or 8' and widths of 3' or 6'. Marvin Windows and Doors, St. Paul, Minn. www.marvin.com CIRCLE 211





StormPlus French doors (left); Commercial door (center); Venting Picture Window (right).

Getting a new look for windows or doors, in a snap

Pella also used this year's Builder's Show as an opportunity to introduce its latest offering—Pella Designer Series windows and patio doors. The new collection, available exclusively on Pella Designer Series double-hung, casement, and awning windows, sliding and hinged doors, and transoms, allows users to simply snap out the blind or shade and replace it with a new color.

Available window fashions include blinds, cellular shades, and unfinished wood grilles. The fashions include light-filtering or room-darkening shades and blinds that help alleviate allergy-aggravating conditions, since they remain clean and virtually dust-free between the glass. There is enough space between the glass for both decorative grilles and a blind or shade. The removable grille's exterior matches the exterior cladding, and the grille's interior can be painted or stained to match the decor.

Shades in the line open from the top down, allowing natural light in from the top while covering the bottom of the unit for added privacy. The new series also features cordless operation, so there are no strings to attract children or pets.

Two exclusive Pella screen options enhance the Designer Series. The Pella Rolscreen retractable insect screen, available on casement windows and sliding patio doors, rolls out of sight when not in use and eliminates the need for seasonal screen storage. Pella Vivid View screens are virtually invisible, allowing for a better view and three times the airflow of a traditional screen. Pella, Pella, Iowa. www.pella.com CIRCLE 212



Window grilles can be easily replaced by the owner.

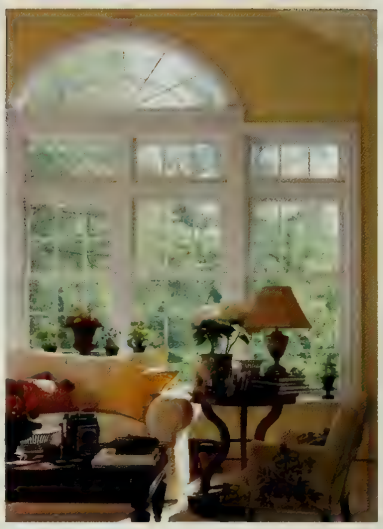
Products

Doors & Windows: Storm-resistant



◄ Twice the fiberglass

Jeld-Wen has undertaken a massive R&D effort to create the next generation of exterior fiberglass doors. The new line of Premium fiberglass doors will feature PÜR-Fiber, a technology that has twice the industry standard for fiberglass content (35 percent content versus 10 to 12 percent), making it four times stronger than any other fiberglass door and giving it the strength to stand up to hurricane forces. Thirty-two standard door styles will be offered. Jeld-Wen, Klamath Falls, Ore. www.jeld-wen.com **CIRCLE 213**



◄ Option with impact

A new impact-resistant option is available for CertainTeed's Bryn Mawr II and New Castle XT lines of vinyl windows. The windows meet wind-borne-debris testing standards of the International Building Code by passing tests ASTM E 1996 and ASTM E 1886 for impact-resistance. The windows are designed with an insulated-glass unit with a laminated piece of glass on the interior that contains a tough layer of PVB for increased safety. CertainTeed, Valley Forge, Pa. www.certainteed.com **CIRCLE 214**

► Impact-resistant for cooler climates



The LifeGuard IG line from Weather Shield is ideal for violent-storm-prone, colder-climate coastal areas from Maine to North and South Carolina. The IG products offer LifeGuard's reinforcing features, but with two panes of glass, rather than one, and other energy-efficient features like Low-E^2 glass and argon- or krypton-filled airspace. The inboard panel protects the house from the potential of flying glass from the outboard panel, which is made from ordinary glass. Weather Shield Windows & Doors, Medford, Wis. www.weathershield.com **CIRCLE 215**

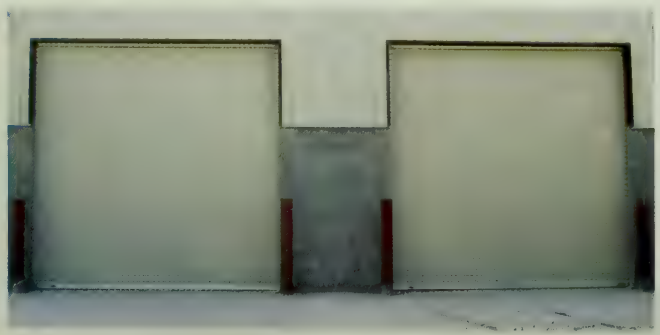
▼ A safer daylighting option

Velux has introduced the Miami-Dade-approved FCM skylight. a curb-mounted, insulated-glass skylight that meets the requirements of the International Building Code/Commercial; International Residential Code; Florida Building Code 2001; and stringent high-velocity hurricane protocols. The FCM skylights work with all sizes of site-built curbs and with the varying thickness of different flashing and roofing materials. Velux America, Greenwood, S.C. www.veluxusa.com **CIRCLE 216**



▼ Wind-load configurator stands up to the test

The Lewis Bear Company of Pensacola, Florida, took occupancy of its new distribution facility only days before Hurricane Ivan struck. Holmes & Holmes Architects had insisted that even the building's 20'-wide-by-14'-tall exterior doors be up to mandated wind-load requirements. Cornell Iron Works utilized their exclusive wind-load configurator to analyze the specific building requirements and supplied 15 coiling doors that withstood the hurricane's wrath. Cornell Iron Works, Mountaintop, Pa. www.cornelliron.com **CIRCLE 217**



► Wood-grain finish option



A new simulated wood-grain finish from PGT is available on WinGuard Impact-Resistant windows and doors. The simulated finish, available in a variety of wood grain and stain combinations, is ideal for homes in coastal markets where weather-resistant aluminum frames are preferable to wood. All WinGuard aluminum-framed products are approved by the Miami-Dade Product Control, which enforces the strictest hurricane protection requirements in the country. The products will be available later this year. PGT Industries, Nokomis, Fla. www.pgtindustries.com **CIRCLE 218**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



KOHLER WaterTile™ Bodysprays & Showerheads
Designed to Inspire.

- Low-Profile Aesthetic
- Fully Adjustable MasterClean™ Sprayface
- Versatile Installation Options
- Lifetime Limited Warranty*
 (see back for warranty information)

KOHLER.com/watertileinfo

1.800.4.KOHLER Ext. QK6

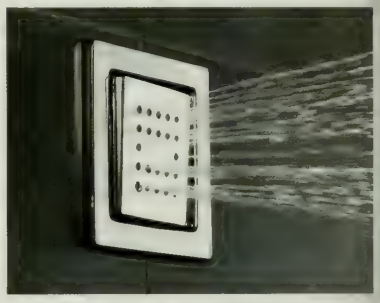
THE BOLD LOOK OF **KOHLER**®



K-8002-CP WaterTile bodysprays shown in Polished Chrome.



K-8022-CP WaterTile 54-nozzle showerhead shown in Polished Chrome.



K-8003-CP WaterTile 22-nozzle bodyspray shown in Polished Chrome.



K-8002-CP WaterTile 54-nozzle bodyspray shown in Polished Chrome.

Subtle Design. Profound Performance.

The charm of WaterTile™ bodysprays and showerheads is in their subtle design and their profound performance. The WaterTile product offering includes both 22- and 54-nozzle 5" x 5" bodysprays and showerheads. The 22-nozzle WaterTile, with a stimulating spray pattern, delivers voluptuous amounts of water, while the 54-nozzle WaterTile provides soothing hydrotherapy. The versatile, fully adjustable sprayface pivots in any direction for all your needs.

KOHLER® WaterTile

Feature	Benefit
Low-profile aesthetic	Coordinates perfectly in virtually any shower environment
Fully adjustable sprayface	Pivots to accommodate your needs
MasterClean™ sprayface	Reduces calcium buildup and is easy to clean
Vibrant® PVD color finish options	Offer exceptional durability, beauty and design versatility
Lifetime Limited Warranty*	Ensures lasting performance

*KOHLER faucets carry a lifetime limited warranty for as long as the original consumer purchaser owns his or her home. Faucets used in commercial settings and a limited number of faucets and accessories used in residential settings carry a Kohler one-year limited warranty. For complete warranty information, call 1-800-4-KOHLER or visit KOHLER.com.

KOHLER.com/watertileinfo

1.800.4.KOHLER Ext. QK6

© 2005 by Kohler Co.



Bamboo, pebbles and
other natural wonders,
now available in rubber.

Whether you're looking for the tranquility and balance found in nature or the bold geometry of a city skyline, you'll find it in our new rubber tile textures. And like all Johnsonite solutions, they give you long life, easy maintenance and superior slip-resistance. High-performance solutions for high-performance environments. 800.899.8916 www.johnsonite.com

Johnsonite

© 2003 Johnsonite, Div. of Duramax, Inc.

CIRCLE 86 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS

Products

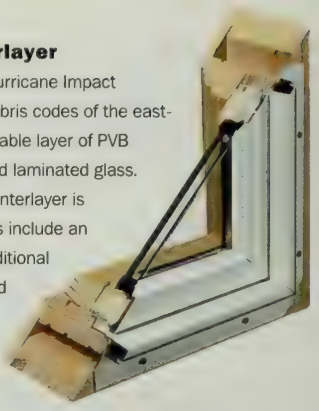
Doors & Windows: Storm-resistant



▲ Tested in the lab, and in the open

Simonton Windows' Product Development Center in West Virginia includes certified test labs that perform in-house and on-site structural, condensation, and thermal testing to help Simonton engineers design windows and doors suited for coastal environments (an air cannon test done to simulate hurricane-force weather conditions is shown at left). In a real life test, only one StormBreaker Plus vinyl casement window in a Punta Gorda, Florida, home sustained minor damage after Hurricane Charley (right). Simonton Windows, Parkersburg, W.V. www.simonton.com **CIRCLE 220**

► Protective laminated interlayer



Vetter Windows and Doors Insulated Hurricane Impact Products meet stringent wind-borne debris codes of the eastern U.S. The product line features a durable layer of PVB bonded between two panes of annealed laminated glass. Should the glass break, the laminated interlayer is designed to remain intact. The products include an out-swing patio door in French and traditional styles, and double-hung, casement, and direct-set picture windows. Vetter Windows and Doors, Mosinee, Wis. www.vetterwindows.com **CIRCLE 219**



◄ Women and children first

Specialty contractor Harmon is providing Orlando Regional Healthcare's new Hospital for Women & Babies with its hurricane-impact-resistant exterior-glazing system. Opening in late 2005, the 11-story, 273-bed facility will feature abundant natural lighting and oversize windows in patient rooms. The hospital's circular design required the glazing team to overclad designated areas to achieve the desired look. Harmon, Golden Valley, Minn. www.harmoninc.com **CIRCLE 221**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



CIRCLE 87 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

METALWORKS Steel Shingles make the look last.



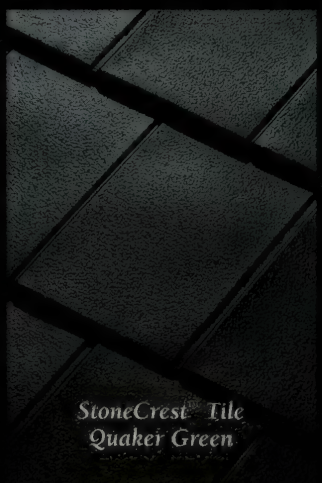
Three timeless looks. One timeless material. METALWORKS Steel Shingles by TAMKO offer homeowners a compelling combination of lasting beauty and protection. Call us, or visit us on the Web, for more information.



Crest™ Slate
mont Blue



AstonWood™
Timber Brown



StoneCrest™ Tile
Quaker Green

METALWORKS
STEEL SHINGLES
TAMKO ROOFING PRODUCTS
1-800-641-4691
www.metalworksroof.com
www.tamko.com

Roof on house is AstonWood™ in Sierra Slate Grey.
For information regarding, or to receive a copy of, TAMKO's limited warranty, contact your local TAMKO representative, visit us online at www.tamko.com, or call us at 800-641-4691.

Representation of colors is as accurate as our printing will permit.
©2005 TAMKO Roofing Products, Inc.

CIRCLE 88 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

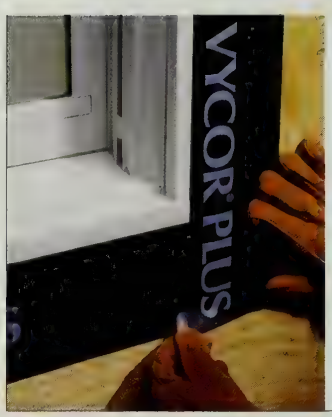
Products

Doors & Windows: Storm-resistant

► Online tools for coastal projects



Andersen windows with StormWatch protection feature a selection of styles designed to resist the effects of high wind and wind-borne debris associated with coastal storms. The Andersen Design Pressure Estimator and Coastal Product Finder are online tools that help architects find the right fenestration products for coastal applications. The software takes user-supplied information to estimate design pressure requirements, recommend the right Andersen product for those estimated requirements, and provide certified documentation and test reports that aid in gaining building permits. Andersen Windows and Doors, Bayport, Minn. www.andersenwindows.com **CIRCLE 222**



◄ Flashing in a flash

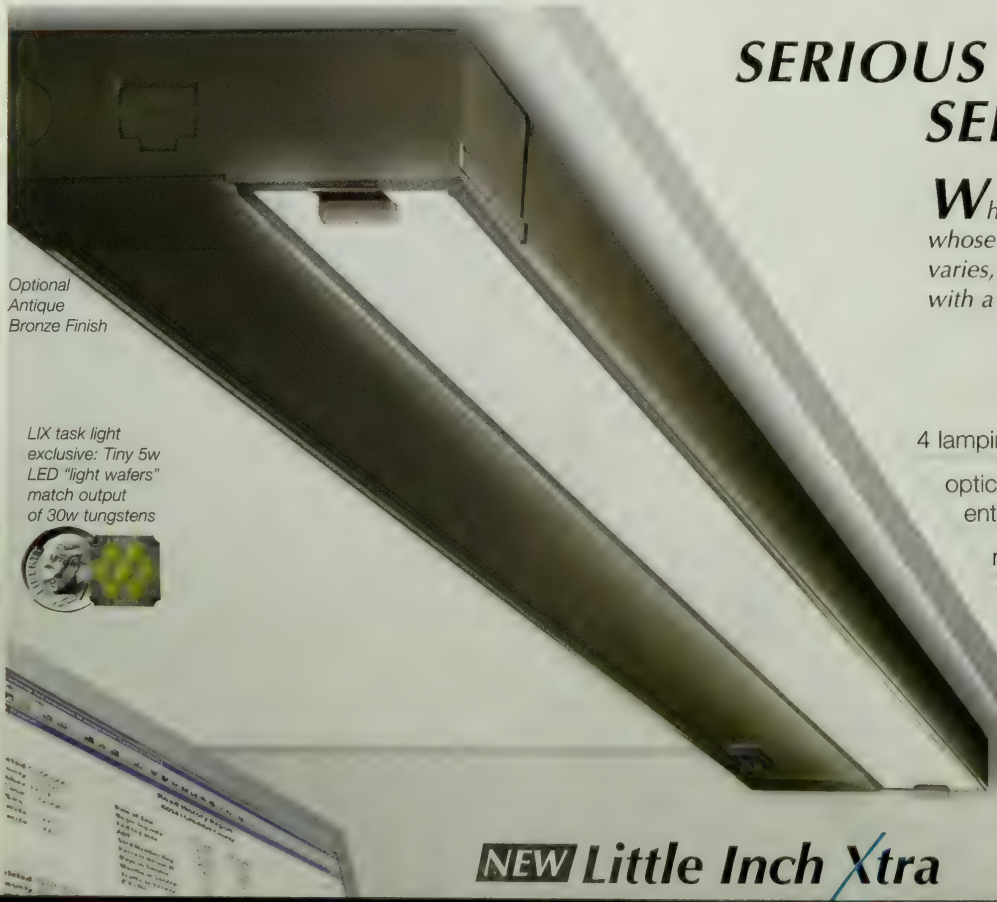
Grace Vycor Plus self-adhered flashing features a cord embedded in the adhesive layer that allows the release paper to split in half. This cord enables proper integration of the flashing with other key moisture-protection elements of the wall. By protecting structures from water infiltration, Grace Vycor Plus reduces the risk of rot and mold development. Grace Construction Products, Cambridge, Mass. www.graceconstruction.com **CIRCLE 223**

► Wind-, debris-, and bullet-safe



GE Advanced Materials has introduced TOR-GARD BAL40 window glazing and framing that passes FEMA 361 Chapter 6 testing for debris-impact-resistance for community shelters. While the exterior surface of the window is glass, the inside is a mar-resistant, GE Lexan polycarbonate laminate sheet. Applications include 911 call centers, police facilities, and emergency rooms. GE Advanced Materials, Brighton, Mich. www.geadvancedmaterials.com **CIRCLE 224**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



SERIOUS WORK DESERV
SERIOUS LIGHTIN

What is the annual investment in an emp whose work area lies under a shelf or cabin varies, of course. But it's thousands more than lig with a $26.95 bulb-in-a-box can justify!

Little Inch Xtra: greater payb on task lighting investm

4 lamping options: LED, fluorescent, xenon, halog

optical systems for superior control of light ove entire work surface

multi-level lighting (dual levels with LEDs)

minimal heat transfer

lamp life of 2,000... 10,000... 20,000 ... or 50,000 hours

lifetime warranty: all components except lamps and transformers
10 year warranty on LEDs

CIRCLE 89 ON READER SERVICE CARD TO ARCHRECORD.CONSTRUCTION.COM/PR

NEW Little Inch Xtra

ALKCO

ARCHITECTURAL
RAILING SYSTEMS

ALL ARCHITECTURAL SYSTEMS DESIGNED, ENGINEERED AND MANUFACTURED BY C.R. LAURENCE



OMMERCIAL ND RESIDENTIAL

ARS ALUMINUM RAILING SYSTEM

Available in many configurations, these impact resistant extruded aluminum railings feature high structural durability and are specially coated to resist the corrosive effects of the elements and salt water.

STRUCTURAL GLASS RAILING SYSTEM

Perfect for projects where clear viewing and a sophisticated appearance are desired. Glass Railings also serve as an effective wind barrier, combining practicality and pleasing aesthetics to create an ideal outdoor balcony environment.

AWS WINDSCREEN SYSTEM

Popular in hotel and condo applications, CRL Glass Pool Surrounds and Windscreens create an effective barrier against wind and sound, without creating the confining feel of a typical fence.





HAND RAILS, GUARD RAILS, WINDSCREENS AND MORE...





Ask for Your Free CD-ROM Catalog Today

The HR05 Railing Systems Catalog features hundreds of new structural glass products, plus valuable technical information and data. You can also view it online at **crlaurence.com** or get a free CD-ROM Catalog.

CRL®

ISO 9001:2000 Certified

crlaurence.com

C.R. LAURENCE COMPANY

Architectural Products Manufacturing Division

Phone: **(800) 421-6144** • Fax: **(800) 587-7501**

CIRCLE 90 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Rethink: Window

Flat. Square. Rectangle. Yawn. Maybe it's time for a new look at windows. When you have the right materials, a window can be whatever you want. To give you flexibility, Pittsburgh Corning Glass Block comes in a wide array of shapes and patterns. It's easy to install, too. So it's a breeze to add light and a view, not to mention fresh thinking, to your next stunning design. Who knows what you'll redo?

At right, Lawrence University, Appleton, Wisconsin
Architect: Ellenzweig Associates, Inc.



To see more examples of rethinking, go to www.pittsburghcorning.com/architects. Or call 1-800-624-2120, ext. 800.

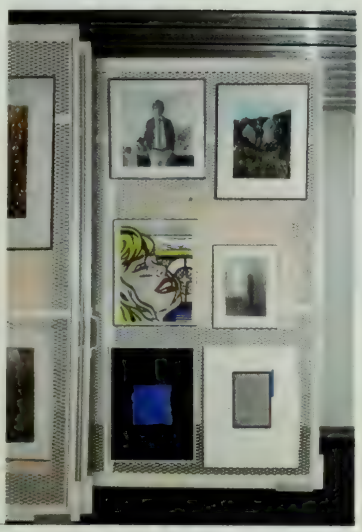
PITTSBURGH CORNING GLASS BLOCK®

Think again.

CIRCLE 91 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs

► Storage panel system



Spacesaver's new Hang-Glider Pro storage panel system offers an efficient way to store framed art, cultural artifacts, tools, equipment, legal evidence, medical instruments, and a range of other objects. The ceiling-suspended pullout system features the industry's thickest-gage aluminum screen. The specially extruded aluminum track includes a frictionless roller guide trolley system to eliminate vibration, while anti-sway guide wheels in the front and rear further protect stored materials. Spacesaver, Fort Atkinson, Wis. www.spacesaver.com **CIRCLE 225**

▼ Time-worn stone, in a laminate

Wilsonart's new Roca laminate series intends to replicate the look of time-worn stone by emphasizing the natural aging and irregularities that occur to surfaces over time. Contrasting with the highly polished looks of granite, marble, and engineered stone, Roca is available in six soft, earthy color combinations with contrasting undertones. Shown here is Antique Roca, featuring layered orange, red, and brown hues contrasted with discreet blue-green accents. Wilsonart, Temple, Tex. www.countertop.com **CIRCLE 227**



► It's showtime once again

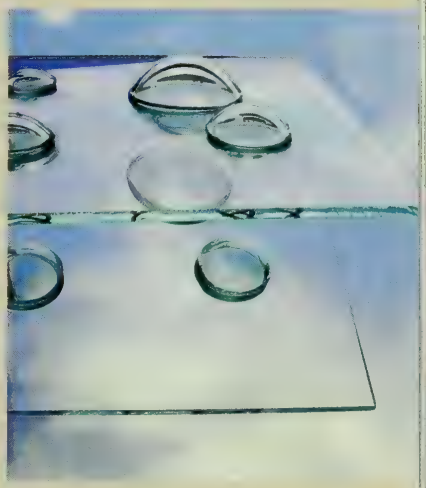


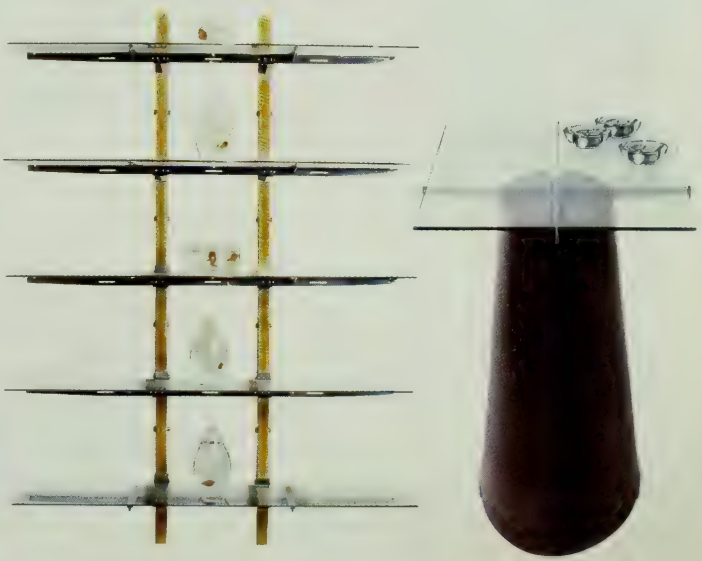
Hart Contracting has completed the exterior renovation of the Wildey Theatre in Edwardsville, Illinois. Constructed in 1909, the three-story masonry building was originally used as a lodge and a theater. As part of a restoration team with Henderson Associates Architects, Hart Contracting focused on details such as matching the grout to exact color standards typical in the early 1900s, and matching bricks that needed replacement to the color, texture, and size of the originals. The building's Vitrolite panels, the sleek glass tile of the '20s and the '30s, were all restored to their original lustrous colors. Hart Contracting, Alton, Ill. www.wildeytheatre.com **CIRCLE 228**

Product of the Month Sphere Glass

Sphere Glass, the latest offering from Nathan Allan Glass Studios, is designed for vertical wall partitions, backbars, side lites, door lites, feature walls, and overhead hanging panels. When specified in a range of background colored panels, the 3D glass is designed with clear spheres to pick up the background color. If clear glass or crystal-clear glass is used as the background panel, colored spheres in light green, blue green, blue, aqua blue, gray, bronze, clear, and crystal clear can be specified. The raised sphere elements are produced in three standard diameters, although larger sizes are possible. As the background panels are safety tempered, Sphere is available for both commercial and residential applications. Currently, the glass is specified in a number of projects, including a Las Vegas casino, several corporate office projects, and a spa for Royal Caribbean Cruise Lines. For one custom project, the Spheres are designed with a 24" diameter and a 4" protrusion. Nathan Allan Glass Studios, Richmond, British Columbia.

www.nathanallan.com CIRCLE 226





▲ Range of inspirations

Inspired by his experiences in a small American steel town, the islands of Japan, and the Nordic nations of Scandinavia, architect Bailey Heck's highly detailed pieces are made from carefully selected solid hardwoods and surgical-quality stainless steel. Handmade by a select number of experienced craftsmen, only one or two of each design is produced concurrently. The Grace shelf (above left) is a wall-hung shelving unit featuring a delicate steel armature that cradles repositionable glass shelves suspended from wood arms. The Trunk table (above right) features a trunklike base onto which a steel bracket elevates a glass tabletop. Bailey Humbert Heck, New York City. www.baileyheck.com **CIRCLE 229**

Stunning Strength



Pawling Corporation Architectural Products Division

(800) 431-3456



Pro-Tek® impact protection stands up to wear, tear and stares. Specify wall guards, corner guards, handrails and vinyl sheet that protect and beautify. From the interior to the exterior, the basement to the lobby to the parking garage, we've got you covered.

www.pawling.com

PAWLING CORPORATION ARCHITECTURAL PRODUCTS DIVISION

CIRCLE 92 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs



▲ Bacteria-fighting fabric duct

The Sedona-Xm fabric duct, from DuctSox, offers a new matte finish in response to architect requests for nonglossy, nonglare polyester duct surfaces. Sedona-Xm also features the HVAC industry's first UL-classified antimicrobial fabric duct for office buildings, schools, hospitals, athletic facilities, retail stores, and other commercial facilities. The active antimicrobial agent protects the fabric from mold, fungus, and bacterial growth, while also reducing odors generated by microbial growths commonly found in HVAC ductwork systems. It is easy to disassemble, launder, and reinstall with minimum reduction of effectiveness. DuctSox, Dubuque, Iowa. www.ductsox.com **CIRCLE 230**



◄ Back saver, earth saver

The Zody chair, from Haworth, introduces an asymmetrical lumbar support system resulting from a joint study between the manufacturer and the Human Performance Institute of Western Michigan University. The only task chair on the market to provide asymmetrical lumbar support without forward displacement, Zody is based on a cradle-to-cradle design protocol. Assembled using 100 percent wind power, Zody features materials that include up to 48 percent recycled content and are 98 percent recyclable at the end of the chair's life. Haworth, Holland, Mich. www.haworth.com

CIRCLE 231



▲ The type of spider you won't mind in the attic

Spider, Johns Manville's new, spray-in, formaldehyde-free, fast-dry insulation system, contains specially designed glass fibers made primarily from sand. During the installation process, the fibers are mixed with a nonhazardous adhesive that eliminates the need for netting and dramatically speeds up drying schedules—on average more than six times faster than cellulose. When professionally installed, Spider reduces defects such as gaps, inadequate cavity-fill, and settling, resulting in maximum thermal performance and reduced air movement. Spider reaches R-values of 15 in 2' x 4' wall cavities and 23 in 2' x 6' wall cavities. Johns Manville, Denver. www.jm.com **CIRCLE 232**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



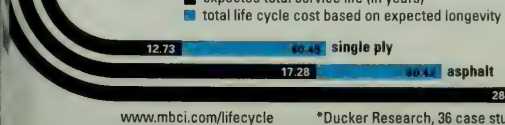
Passion for Perfection

Passion drives craftsmen to achieve outstanding results.
From fabric, pigments, and marble to jade, bricks, and wood.

Our passion is metal. With our craftsmanship, we not only make the world's best standing seam metal roofing systems, we also teach professionals the right way to install them. We go to the job site and personally inspect the work in progress so we can assure long lasting, beautiful performance, and guarantee it with our Single Source Warranty.

"I choose a block of marble and chop off everything I don't need."
– François-Auguste Rodin

Low Slope Roofing Life Cycle Cost Comparison*



www.mbci.com/lifecycle

*Ducker Research, 36 case studies, May 2004

ENERGY STAR PARTNER

MBCI

www.mbci.com
16 MBCI locations to serve you

Houston, TX (877) 713-6224 • Adel, GA (888) 446-6224 • Atlanta, GA (877) 512-6224 • Atwater, CA (800) 829-9324
Dallas, TX (800) 653-6224 • Indianapolis, IN (800) 735-6224 • Lubbock, TX (800) 758-6224
Memphis, TN (800) 206-6224 • Oklahoma City, OK (800) 597-6224 • Omaha, NE (800) 458-6224
Phoenix, AZ (888) 533-6224 • Richmond, VA (800) 729-6224 • Rome, NY (800) 559-6224
Salt Lake City, UT (800) 874-2404 • San Antonio, TX (800) 598-6224 • Tampa, FL (800) 359-6224

CIRCLE 93 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Vitracolor™ GLASS

OPAQUE COLORED GLASS IS STRIKING IN STRIPES

Glass for interior and exterior surface applications. Thirty striped and solid colored offerings.

SKYLINE DESIGN
ARCHITECTURAL ART GLASS

Tel: 888.278.4660
www.skydesign.com

NeoCon Booth 8-6106
Made in Chicago

CIRCLE 94 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs



▲ Expanding the family

At this year's Cologne fair, B&B Italia added four new seating elements to the chaise longue and high-backed chair in Patricia Urquiola's Lazy Collection. The collection now includes a low-backed chair, easy chair, armchair, and stools in two sizes. Designed for home and contract use, the chair's bright chrome frames are upholstered in one or two colors. To underline the lightness of the seat, the fabric underneath is designed in a contrasting color. The high-backed chair can be covered in a material specially conceived by Urquiola for the series. B&B Italia, New York City. www.bebitalia.it **CIRCLE 233**

► Speedier column-framing system



The new Loctite Fast Frame column-framing system from Henkel reduces both time and costs associated with framing square concrete or steel columns for drywall installation. According to the manufacturer, the patent-pending system reduces framing time by 80 percent and associated expenses by 40 percent. Loctite replaces stud and track installation with brackets that are attached to concrete columns using adhesives, or to steel columns using powder-actuated fasteners. The brackets fit all square column dimensions and can reduce the time required to frame an 8'-tall column from 40 minutes to 5. The adhesive system requires a 24-hour drying period before drywall installation can begin. Henkel Group, Rocky Hill, Conn. www.fastframe.loctite.com **CIRCLE 234**



◄ Seating for a higher power

Sauder Manufacturing has added Clarity auditorium seating to its line of worship furniture, including pews, upholstered wood chairs, and chancel furniture (for the part of a church containing the altar and seats for clergy and choir). The chairs feature integrated accessories designed specifically for worship facilities, including book holders, communion-cup holders, seat and row identification, aisle lighting, and card and pencil holders. A proprietary pivot-mechanism design harnesses gravity to provide quiet and consistent seat-lift performance. The seating is upholstered in such a way that the fabric is renewable; an armless version of the chair is available, as well. Sauder Manufacturing, Archbold, Ohio. www.sauderworship.com **CIRCLE 235**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



Designing *with* LIGHT

LIGHTOLIER®

Are you designing with light?
Now there's an easier way. At **www.designingwithlight.com** you can explore architectural lighting solutions, get budgetary pricing, lead times, fixture schedules and application guidelines – all in a personalized project workspace.

While visiting, also request our new visual selection catalog for **Designing With Light**.

© 2005 Genlyte Group LLC. All rights reserved. www.lightolier.com

CIRCLE 95 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

HIGH ENERGY EFFICIENCY FOR YOUR CUSTOMERS. HIGH PRAISE FOR YOU.

ENGLERT ULTRA-COOL™ METAL ROOFING.

Now, one product seamlessly combines beauty, energy efficiency and accolades. Englert Ultra-Cool™ metal roofs are tested systems that offer all the profiles, finishes and textures you could want in standing seam. Each style comes in virtually unlimited panel lengths from eave to ridge, without end laps or splicing. And a concealed fastener system means the only thing you notice is the cool design. Best of all, every roof is backed by a 35-year warranty, and is Energy Star® and LEED® compliant. Englert Ultra-Cool Metal Roofing. Tops in efficiency, design – and referrals.



Images, Private residence by architect Hugh Newell Jacobson in Washington, D.C.



ENGLERT

Call 1-800-ENGLERT (364-5378) or visit www.englertinc.com for more information

CIRCLE 96 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Literature

Spanish design guide

The Trade Commission of Spain has introduced the *Guide to Spanish Design & Interiors*, a 275-page guide presenting a range of contemporary product designs for residential and commercial spaces. Featuring contributions from more than 75 Spanish companies, the product categories include Home & Accessories, Kitchens, Bathrooms, Lighting, Office, Contract, Street Furniture, and Floor & Wall Tiles. Trade Commission of Spain, New York City. www.spaintiles.info

CIRCLE 236

Wall/ceiling brochures

illbruck Architectural Products' new brochures feature acoustical wall and ceiling products for offices, schools, stores, and other environments. illbruck, Minneapolis. www.illbruck-archprod.com/literature

CIRCLE 237

Hardware helper

Doug Mockett & Company's new 28-page brochure features all of the new products the company has introduced in the past six months. Highlights include three new power and data grommets, new Scandinavian-design drawer pulls, and new items for kitchen and bath. Doug Mockett & Company, Manhattan Beach, Calif. www.mockett.com **CIRCLE 238**

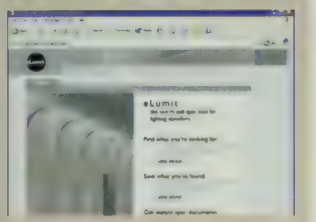
Perforated products

McNichols has completely updated its new catalog, featuring perforated and expanded metals, wire cloth, safety gratings, handrail components, and fiberglass structurals. The catalog includes new handrail, plank, and decking products. McNichols, Tampa. www.mcnichols.com

CIRCLE 239

NEW SITES FOR CYBERSURFING

Search and spec tool showcases over 30,000 lighting products from 48 spec-grade manufacturers. **www.elumit.com**



Brooklyn-based contemporary furniture maker's site. **www.cityjoinery.com**

Technical Glass Products new site presenting complete product features, testing info, CSI-format specs, and CAD drawings. **www.fireglass.com**

Redesigned site assists in online glass selection. **www.viracon.com**









For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



CIRCLE 97 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PROMOSEDIA2005
INTERNATIONAL
CHAIR EXHIBITION

what

THE ONLY SHOWCASE
of its type in the world specialized in seating, promoting chair design open to the trade and professionals only

when

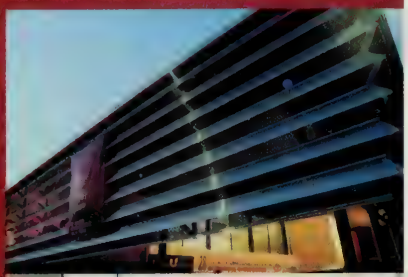
SEPTEMBER 8TH_11TH
6,000 products on display, exhibitors from Europe and overseas, visitors from 73 countries in 2004

where

UDINE, ITALY
near Venice, in the heart of the industrial chair district, with an old tradition and know-how in chair manufacturing

why

ESPECIALLY CHAIRS
In the chair district about 1,000 manufacturers produce about 40 million chairs every year, 1/3 of the total world's production















www.promosedia.it

CIRCLE 96 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Literature

Fire-rated glass video

Technical Glass Products introduced *Burning Issues: Understanding Today's Fire Rated Glass & Framing*, a free educational video available to architects, specifiers, code officials, and other industry professionals. The 20-minute video guides viewers through the various categories of fire-rated glass products and how to determine which materials are best for a given application. The video also addresses new design innovations in fire-rated glazing materials, the impact of recent code changes to improve product safety, and the effect of new security concerns being shaped by world events. Technical Glass Products, Kirkland, Wash. www.fireglass.com **CIRCLE 240**

Tile and stone spec guide

Laticrete has introduced the *Laticrete Architectural Guidebook* CD-ROM, a resource guide that features a complete installation specification along with the applicable detail drawing, both fully editable to fit the user's exact project requirements, and printable or exportable in a variety of electronic and hard-copy formats. The *Guidebook* works on PC and Mac platforms and includes an industry reference section that allows users to view appropriate codes and national standards for virtually all ceramic tile and stone applications. Laticrete, Bethany, Conn. www.laticrete.com/ag **CIRCLE 241**

Laminate selections

Abet Laminati has a new brochure describing more than 500 decorative, high-pressure laminate surfaces, including metallics, wood grains, solid colors, textures, and digitally printed or silk-screened designs. Abet Laminati, Englewood, N.J. www.abetlaminati.com **CIRCLE 242**

Color-trend booklet

Invista, the manufacturer of Antron carpet fiber, announced that its *2005 Color Point of View* (*POV*) booklet is now available. The third issue of the *Color POV* explores five essential color-trend indicators (areas that have been influencing color and design for a long time) and five emerging trends. Each category has inspired a palette or family of colors that work together, and each of the 50 new colors is codified to the Pantone color specifier for architecture and interiors. Invista, Kennesaw, Ga. www.antron.invista.com **CIRCLE 243**









For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.


CAPTURING
LIGHT AND
ENERGY
ONE
WINDOW
AT A TIME
Lumar
WINDOW FILM
he green building
hoice
EARNS UP TO 2
EED CERTIFICATION
REDITS
LESS EXPENSIVE
THAN LOW-E
GLASS.
MORE ENERGY
EFFICIENT THAN
ORDINARY
GLAZING.
ERFORMS LIKE
SAFETY GLASS.
MORE
DIVERSE
THAN FROSTED
GLASS.
800-2-LLUMAR
www.llumar.com
ASK ABOUT
ENERGY
STAR
E 99 ON READER SERVICE CARD OR GO
IRECORD.CONSTRUCTION.COM/PRODUCTS/
SWEETS#8870, BuyLine 49
DuPont Teijin Films
AIA
BOMA
PROTECTING PEOPLE FIRST
FOUNDATION
IWFA
INTERNATIONAL
WINDOW FILM
ASSOCIATION
products are registered trademarks of CPFilms Inc., a unit of SOLUTIA, and produced by an
Americans using only American made materials. ©2007 CPFilms, Mart

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"How Is LEED Faring After Five Years in Use?," Architectural Record (06/05, page 135).** 065EDITK

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through June 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit. Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	**6.**	a	b	c	d
2.	a	b	c	d	**7.**	a	b	c	d
3.	a	b	c	d	**8.**	a	b	c	d
4.	a	b	c	d	**9.**	a	b	c	d
5.	a	b	c	d	**10.**	a	b	c	d

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ☐ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ☐ Visa ☐ Mastercard ☐ American Express **Card#**

Signature **Exp. Date**

Check below:

☐ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

☐ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

Call For Entries



Wishbone Leg, 2004 First Place, designed by Aaron Zorndorf

2005 marks the 20th anniversary of our industry leading edge competition seeking innovative designs of furniture hardware, components and accessories, for commercial and residential furniture.

Offering a First Prize of $1000, an engraved trophy, and a royalty.

Entries close September 1, 2005, so enter today! Call (800) 523-1269 or visit mockett.com for more details.

MOCKETT
DOING MOCKETT'S A COMPANY SINCE

CIRCLE 100 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Natural Wood Products

Clear Grades **Direct Delivery**



Fir Timbers
Cedar Sidings
Fascia
CVG Trim
T&G Paneling
Shakes/Shingles
Soffit
S4S Decking
2 " Roof Decking
Flooring

Distributors of
• Port Orford Cedar
• Alaskan Yellow Ceda



Bear Creek Lumber
www.bearcreeklumber.com
(800) 597-7191
fax 509-997-2040

CIRCLE 101 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/


IMAGINE THE RITE DOOR®
The real beauty of this versatile door system is in your imagination.
We could tell you about all the advantages of The RITE Door for your commercial openings. Like how it has pre-installed hardware for trouble-free installation and performance, and how it fits perfectly with virtually any application—from hospitals and hotels to retail office spaces and schools. And, how it can also blend completely into the architecture or make its own design statement with its wide range of colors, textures and finishes. But, what really matters is all the ways you can imagine it.
So go ahead, use your imagination.
Visit www.adamsrite.com/theritedoor4 to see more. Or, call: 1.800.87.ADAMS or Email sales@adamsrite.com for further details.
Architect: Nadel Architects, Inc. Installers: Don La Force Associates, Inc.
ADAMS RITE
MANUFACTURING CO
CIRCLE 102 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"Associations: Dynamic Connections for the Profession"(06/05, page 163).** 06SPONN

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through June 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit. Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	**6.**	a	b	c	d
2.	a	b	c	d	**7.**	a	b	c	d
3.	a	b	c	d	**8.**	a	b	c	d
4.	a	b	c	d	**9.**	a	b	c	d
5.	a	b	c	d	**10.**	a	b	c	d

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ❑ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ❑ Visa ❑ Mastercard ❑ American Express **Card#**

Signature **Exp. Date**

Check below:

❑ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

❑ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

One Incredible Design!

Visit our website to see all 70 of our wire access grommets and our other interesting components.

ABG3

This wire grommet is pure modern design! Round cap has an opposing arc, an oval cord slot lined with radiused brush. Sublime elegance. ABG3 is 3 1/2" diameter going into a 3 5/16" hole. Cord slot is 2 1/4" long and 7/8" at its deepest point. Finish: Satin Aluminum



"FINE ARCHITECTURAL HARDWARE FOR YOUR FINE FURNITURE"®

Doug Mockett & Company, Inc • Manhattan Beach, CA • 800.523.1269

MOCKETT

DOUG MOCKETT & COMPANY, INC

www.mockett.com

CIRCLE 103 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



3form

MATERIAL SOLUTIONS

3-form.com / 800.726.0126

CIRCLE 104 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

McGraw Hill CONSTRUCTION Sweets
Product Marketplace



The largest, most up-to-date collection of architectural catalogs online

Spend less time searching and more time designing at sweets.construction.com

Now every catalog in Sweets Catalog Files is online at Sweets Product Marketplace, the most authoritative industry product information source for nearly a century.

Explore: 61,000+ of the most updated products, all in one Product Marketplace, all classified by CSI MasterFormat™ '04

Download, copy, paste: 1,800 PDF format architectural catalogs, 4,000 3-part specs, and 15,000 CAD details instantly

Register now at sweets.construction.com to become a member and enter to win an Apple iPOD mini.

For more information about putting your catalog in the Sweets Product Marketplace, call 1-800-394-4309.

Connecting people_projects_products

McGraw Hill CONSTRUCTION

SPMAR205

Find us online at www.construction.com

The McGraw-Hill Companies

BELDEN

THE BELDEN BRICK COMPANY

Canton, Ohio / (330) 456-0031

www.beldenbrick.com

An ISO 9001:2000 Registered
Quality Management System





Colors

Belden Brick is available in a world of colors including soft whites and creams, golden buffs and dusty tans, delicate pinks and cinnamon reds, chocolate browns, pewter grays and coal blacks. With so many colors to choose from, your options are truly endless. Here is a small sample of over 200 color ranges, 13 textures and 16 different sizes.

Landmarks in Brick

Sizes & Shapes

More sizes mean lower wall costs. With as many as sixteen different sizes to choose from Belden has the size you need. Plus, Belden has made thousands of special shapes to provide special details for individual projects. Need an "impossible" shape for your project? Then call Belden Brick and learn how the impossible can become reality.



Textures

Belden Brick offers thirteen different textures that range from silky smooth finishes to rugged randomly textured styles. Each texture can make its own distinctive contribution to the visual impact you seek.









CIRCLE 105 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

New & Upcoming Exhibitions

Going Green Exhibition
San Francisco
June 1–30, 2005
This exhibition showcases the 2005 American Institute of Architects Committee on the Environment (COTE) Top 10 award winners as well as past winners. At the AIA San Francisco Gallery. Call 415/362-7397 or visit www.aiasf.org.

The Architect Jean Nouvel Meets Louisiana
Humblebaek, Denmark
June 7–September 18, 2005
Jean Nouvel is one of the most famous members of the generation that has been called the New Wave of French architects, all of whom participated in "Les Grands Projets" in Paris during the Mitterrand era.



Jean Nouvel's self-curated exhibition aims to demonstrate his fundamental architectural principle—the strong dialogue with the spirit and specific character of a place that forms the point of departure for every Nouvel project. At the Museum of Modern Art. Call 45/4919-0719 or visit www.louisiana.dk.

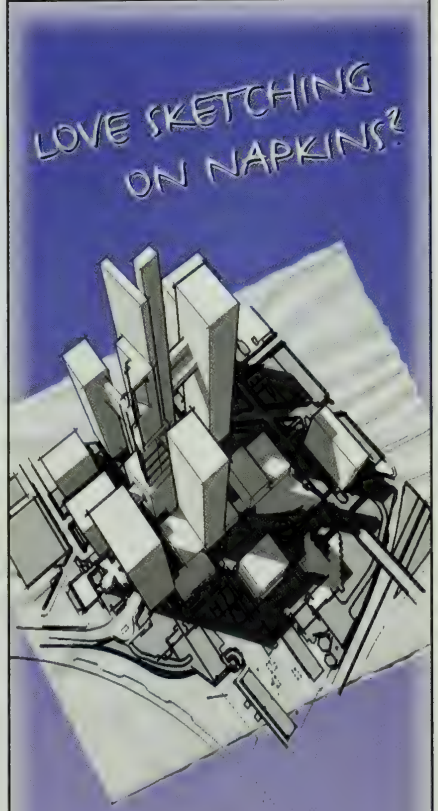
Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation 1968–1975
New York City
June 10–September 10, 2005
In response to the lack of housing units being built for families with limited income, a concerned group of architects, planners, policy makers, public advocates, and environmental psychologists will take a look at the situation by presenting an evaluation of the housing produced by the New York State Urban Development Corporation. The exhibition will use plans and photographs of a sample of projects around New York State that demonstrate housing of differing conditions: urban and suburban; mixed income; high-rise and low-rise; various densities; and various building materials and technologies. At the Center for Architecture. Visit www.udchousing.org or www.aiany.org.

Going, Going, Gone? Mid-Century Modern Architecture in South Florida
Fort Lauderdale, Fla.
July 8–October 30, 2005
Can we still save South Florida's Midcentury Modern architecture? This exhibition is a photographic journey through Broward and Miami-Dade counties, featuring the work of photographer Robin Hill, who has shot dozens of outstanding South Florida structures dating back to the mid-20th century. At the Museum of Art. Call 954/525-5500 or visit www.moafl.org.

Romantic Modernist: The Life and Work of Norman Jaffe, Architect
Southampton, N.Y.
July 24–September 18, 2005
Norman Jaffe built over 600 projects during his 35-year career. He received numerous architecture awards and also participated in national and international exhibitions at leading institutions, including New York's Museum of Modern Art. Eastern Long Island is where Jaffe found his place in American architecture, creating unique vacation homes while exploring his love of light and form. This is the first major exhibition to examine the life and work of this important American architect. At the Parrish Art Museum. Call 631/283-2118 or visit www.parrishart.org.

Jean Prouvé: Three Nomadic Structures
West Hollywood
August 14, 2005–November 27, 2006
The first American presentation of the work of celebrated French designer and architect Jean Prouvé (1901–84), this exhibition includes furniture, vintage photography by Lucien Hervé, and architectural elements that address the most important aspects of Prouvé's practice: technological innovation, itinerant housing, the development of modular systems, and the use of aluminum. The exhibition installation, designed by Evan Douglis, is inspired by Jean Prouvé's commitment to exploring the most advanced technology of his time. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

2005 Serpentine Gallery Pavilion Program
London
Summer 2005
Portuguese Pritzker Prize–winning architect Alvaro



SketchUp®

Award-winning!

SketchUp is a must-have 3D tool for busy architects. It's unique user interface allows for quick, easy 3D model creation, modification and presentation without a steep learning curve.

And... SketchUp works and plays well with CAD and multimedia applications!

Mac or Windows $495.

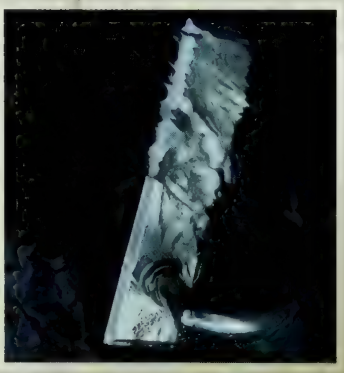
Download your FREE trial:
www.sketchup.com

CIRCLE 106 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Stone River Bronze









swinging french doors
bronze hinges
sliding french doors
bronze window hardware

classic series • designer series

StoneRiverBronze.com

CIRCLE 107 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

Siza and his long-time collaborator, the distinguished architect Eduardo Souto de Mouro, will design the next Serpentine Gallery Pavilion. Since the commission was launched in 2000, it has resulted in four landmark temporary structures. At the Serpentine Gallery. Call 020/7402-6075 or visit www.serpentinegallery.org.

Ongoing Exhibitions

Michael Maltzan: Alternate Ground
Pittsburgh
Through June 12, 2005
A complete monographic exhibition dedicated to the work of Michael Maltzan and his Los Angeles–based practice Michael Maltzan Architecture. At the Heinz Architectural Center, Carnegie Museum of Art. Call 412/622-3131 or visit www.cmoa.org.

2nd International Architecture Biennale Rotterdam: The Flood
Rotterdam, the Netherlands
Through June 26, 2005
With the exhibitions *The Water City*, *Mare Nostrum*, *Polders*, *Three Bays*, and *Flow*, the biennale will spotlight the relation between water and architecture in the Netherlands and around the world. In addition, the biennale will feature numerous conferences, lectures, excursions, a film program, a public weekend, and a city program. At Las Palmas and the Netherlands Architecture Institute. For further information, visit www.biennalerotterdam.nl.

Gunther Dominig: Structures That Fit My Nature
West Hollywood
Through June 26, 2005
The exhibition focuses on two key projects by the contemporary Austrian architect: the Steinways (Stone House), the architect's own home, still in process, and the prize-winning Nuremberg Documentation Center (Dokumentationszentrum), a historical archive that transforms Albert Speer's Nazi coliseum into a memorial. At MAK Center at the Schindler House. Call 323/651-1510 or visit www.makcenter.org.



Ornament-Architecture Exhibition
Pittsburgh
Through June 13, 2005
This exhibition aims to examine and reveal the contemporary understanding of ornament in present architectural design, allowing for a new perspective on historical precedent. At Edge Studio. Call 412/345-5005 or visit www.edge-studio.com.

Constructing Stata: Photographs of Richard Sobol
Cambridge, Mass.
Through June 15, 2005
A collection of unpublished photographs captures the construction process that brought MIT and the world the Frank Gehry–designed Stata Center. Through the works of Boston-based Richard Sobol, visitors experience up close how this spectacular building came together. At MIT Museum's Compton Gallery. Call 617/253-4444 or visit www.web.mit.edu/museum.

Carlos Garaicoa
Los Angeles
Through July 17, 2005
The first U.S. museum survey of recent work by Cuban artist Carlos Garaicoa, who addresses Cuba's politics and ideologies through the examination of Modern architecture. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

The High Line
New York City
Through July 18, 2005
An exhibition of new High Line design work by the team of Field Operations and Diller Scofidio + Renfro. At the Museum of Modern Art. Visit www.thehighline.org.

Heather Allen: Architectural Textiles
Washington, D.C.
Through July 29, 2005
This exhibition features 30 of Allen's handwoven and painted rugs and wall textiles. The architectural imagery represents Allen's exploration of interior space and emotional color. At the Octagon, the museum of the American Architectural Foundation. For information, call 202/638-3221 or visit www.theoctagon.org.

Vanishing Point
Columbus, Ohio
Through August 14, 2005
This exhibition features photographs, paintings, drawings, video, and mixed-media installations that explore the aesthetics of contemporary urban "nonspaces." These ubiquitous public

he American Institute of Architects

honor awards 2006



call for entries

architecture

ENTRY DEADLINE: August 5, 2005
SSION DEADLINE: September 2, 2005

interior architecture

ENTRY DEADLINE: August 19, 2005
SION DEADLINE: September 16, 2005

regional & urban design

NTRY DEADLINE: September 9, 2005
BMISSION DEADLINE: October 7, 2005

the twenty-five year award

SSION DEADLINE: September 2, 2005

For more information, go to
www.aia.org/nationalawards.

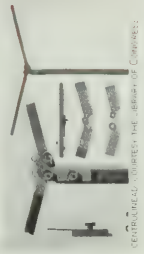
Celebrating the best in contemporary American architecture.

AIA

Yale Center for British Art, New Haven, Connecticut; architect: Louis I. Kahn, FAIA; completed by Pellecchia & Meyers; photo by Richard Caspole, courtesy of the Yale Center for British Art

NATIONAL BUILDING MUSEUM AT NBM

lectures



June 13
Vedic Architecture: A Holistic Approach to Sustainability
Jonathan Lipman, AIA; and Jeffrey Abramson, partner in The Tower Companies

June 16
An Architect's Odyssey from Ruling Pens to Computers
David Thompson, AIA, vice president of RTKL Associates Inc.

June 28
Seminar: Green Building Guidelines
Paul Konove, president of Carolina Country Builders, Chatham County, Inc.

exhibitions



Jewish Washington: Scrapbook of an American Community
opens June 24, 2005

Tools of the Imagination
through October 10, 2005

Liquid Stone: New Architecture in Concrete
through January 29, 2006

Washington: Symbol & City
long-term exhibition

national building museum

401 F Street NW
Washington, DC 20001
202.272.2448
www.NBM.org

For more information and to register for programs, call or visit our website. Discounts for members and students.

Dates & Events

realms—convenience stores, hotel lobbies, shopping malls, airport terminals, parking lots—are often considered anonymous, banal, or otherwise socially and culturally insignificant. Rather than objectively documenting these spaces, the artists in *Vanishing Point* interpret them by focusing on their experiential and atmospheric qualities. At the Belmont Building, Wexner Center for the Arts. Call 614/292-0330 or visit www.wexarts.org.

Filigree Spaces: Textile Installations by Piper Shepard
Baltimore
Through September 18, 2005
The two new installations, featuring a dramatic curtain wall in the Baltimore Museum of Art's lobby and a "room within a room" design in the BMA's textile gallery, explore the connection between textiles and architecture. At the Baltimore Museum of Art. Call 410/396-7100 or visit www.artbma.org.

a_show Stage 2: Austrian Architecture in the 20th and 21st Centuries
Vienna
Through September 2005
Due to the sheer scope of material covered by the exhibition, *a_show* is being subdivided into 10 themes to be opened successively in three stages. The first stage, covering the period 1850–1918, opened in March 2004 with much success. *Stage 2* extends to the period from 1919–58. At the Architekturzentrum Wien. Call 431/522-3115 or visit www.azw.at.

On Tour with Renzo Piano & Building Workshop: Selected Projects
Los Angeles
Through October 2, 2005
Featuring several seminal works, the exhibition shows an intimate view of one of the most respected and visionary architects of our time. Piano's involvement in each stage of a building's development—from concept and master plan to construction and detailing—is chronicled. In the Ahmanson Building at the Los Angeles County Museum of Art. Call 323/857-6000 or visit www.lacma.org.

Transformed: Uncommon Uses of Materials in Contemporary Design
Philadelphia
Through October 9, 2005
With a focus on both form and function, this exhibition comprises 19 contemporary design objects in the Philadelphia Museum of Art's collection, providing an illuminating look at what happens when today's designers fuse utilitarian objects with unconventional materials, such as silicon, recycled plastic, fibrated concrete, and even goose feathers. The exhibition includes pieces by Ingo Maurer, Frank O. Gehry, Tokujin Yoshioka, and Fernando and Humberto Campana, among others. At the Philadelphia Museum of Art. Call 215/763-8100 or visit www.philamuseum.org.

Lectures, Conferences, and Symposia

Architects in Troubled Times: Mies and the Making of Modernism
Chicago
June 4, 2005
Noted author and historian Franz Schulze will deliver the keynote address at a conference focused on the legacy of Mies van der Rohe. At the Illinois Institute of Technology. Call 312/922-3432 or 312/332-5870 for more information.

The New York State Urban Development Corporation Symposium Committee
New York City
June 10–11, 2005
The Symposium's panels will discuss the UDC initiative, operations, emphasis on design quality and livability, the role of politics, and the future of housing for people with limited income. Panelists will include former UDC principals, housing developers of for-profit and not-for-profit projects, architects and planners, architectural historians and critics, and current housing officials. In conjunction with the exhibition *Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation*. At the Graduate Center, CUNY. Visit www.UDChousing.org.

NeoCon World's Trade Fair
Chicago
June 13–15, 2005
An important annual event for professionals that design, plan, or manage any type of commercial or residential interior. With thousands of new product introductions and top industry players, NeoCon includes more than 1,200 showrooms and exhibitors. At the Merchandise Mart. Call 800/677-6278 or visit www.merchandisemart.com.

Dates & Events

2005 Ecobuild America Conference and Show
Orlando
June 20–23, 2005
To support the needs of an expanding green and sustainable building market, the conference combines educational sessions, tutorials, and cutting-edge information from national vendors by covering the best building techniques and the latest technology. At Disney's Coronado Springs Resort and Convention Center. Visit www.sbicouncil.org.

Green Cities Mundaneum 2005: IV International Reunion of Architecture
San José, Costa Rica
June 23–25, 2005
Mundaneum is dedicated to the discussion of the state of cities, mainly in the developing world, its impact on the natural environment, and of recent world architecture. Organized every two years by the faculty of the Architecture and Urbanism department of Universidad del Diseño, speakers include Jamie Lerner of Curitiba, Brazil; Albert Pope of Rice University; architects Michael Sorkin and Steven Ehrlich, as well as other experts from Europe and Latin America. For further information, visit www.unidis.ac.cr.

Film: Philip Johnson: Diary of an Eccentric Architect
Washington, D.C.
June 25, 2005
Narrated by Philip Johnson himself, this film presents his work, the importance of the act of creating architecture, the actual construction of a design plan, and the steps taken to ensure that his architectural creations interact with their environment. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Seminar: Green Building Guidelines
Washington, D.C.
June 28, 2005
In this intensive seminar, cosponsored with the Sustainable Buildings Industry Council, home builders, architects, and remodelers will learn about sustainable home-building design. Paul Konove, president of Carolina Country Builders of Chatham County, will cover such topics as sustainable site planning, increased energy efficiency, and environmentally sound building materials and construction waste-management practices. Call 202/272-2448 or visit www.nbm.org.

Understanding NFPA 101
Hoffman Estates, Ill.
June 30–July 1, 2005
A two-day course to help architects, building inspectors, and plan reviewers understand the basic requirements of the 2002 edition of the Life Safety Code. At the Building and Fire Code Academy. Call 847/884-4969 or visit www.bfcacademy.com.

Rafael Viñoly Architectural Training and Research Initiative
New York City
Application deadline: July 1, 2005
A 14-week course of weekly master classes starting September 2005 will focus on the specific nature of the intellectual and operational instruments that are the basis of a professional practice. The tuition-free course, aimed at advanced students or teachers of architecture or those already in practice, is intended to bridge the significant gap between the nature of formative instruction in architecture schools and the requirements of the professional field. For additional information, visit www.rvatr.com.



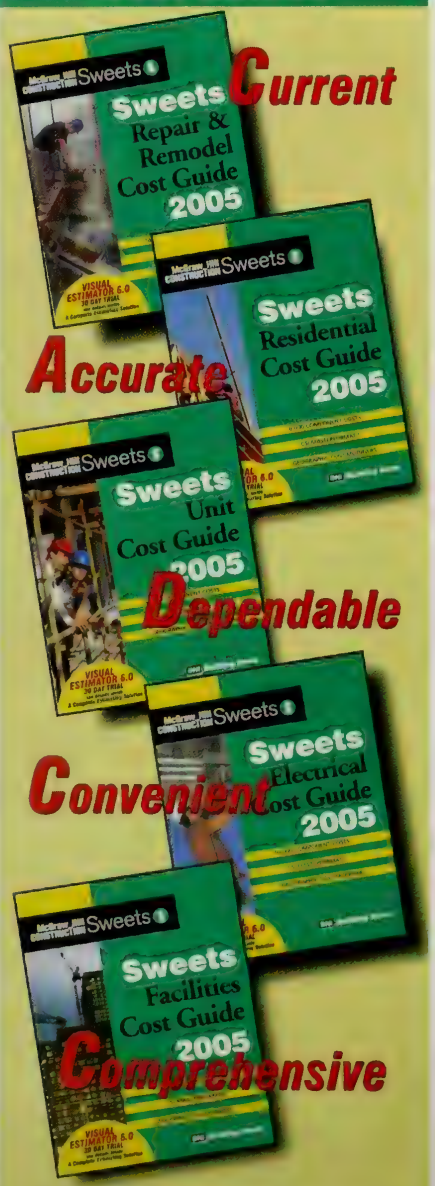
The UIA 2005 Istanbul Congress
Istanbul
July 3–7, 2005
The UIA 2005 Istanbul Congress will be organized under the theme of "Cities: Grand Bazaar of Architecture" as a multidimensional event including meetings, conferences, interviews, exhibitions, competitions, tours, an architectural fair, as well as social and cultural activities. Visit www.uia2005istanbul.org for more information.

Competitions

The John M. Clancy Award for Socially Responsible Housing
Deadline: June 13, 2005
This award recognizes and encourages excellence in the planning, design, construction, and maintenance of socially responsible urban housing. It honors an organization, group, or individual who has been a major force behind one or more built housing developments that make a difference in the lives of diverse populations of all income levels through the creation of high-quality multifamily housing. Visit www.johnclancyaward.org.

Cost estimating data you can count on!

The 2005 Sweet's Cost Guides



CALL 1-888-264-2665
Please specify priorty code 444T
McGraw Hill CONSTRUCTION Sweets
BNi Building News
1612 S. Clementine, Anaheim, CA 92802
www.bnibooks.com

Dates & Events

Higher Education Facilities Design Awards
Deadline: June 21, 2005
Public and private college and university facilities built anywhere in the world by New England architects are eligible, and architects anywhere in the world may submit projects built in New England. Visit www.architects.org/awards.

2005 Internship Conference Essay Competition
Deadline: July 1, 2005
The Advisory Committee invites entrants for an essay competition to select 25 emerging professionals to attend and participate in the conference in San Antonio, Texas, September 22–24, 2005. Entrants are asked to respond in 500 words or less to one of the following questions: "What should an architectural internship be?" or "If you could change one thing about internship in architecture, what would that change be?" Visit www.designingtomorrowsarchitect.org.

Park Avenue Design Ideas Competition
Marco Island, Fla.
Registration Deadline: July 1, 2005
The purpose of this competition is to create ideas and goals for the future development of this urban landscape nestled in the heart of Marco Island. It is open to all architects, planners, landscape architects, students, and artists. Visit www.aiaflasw.org for further information.

Shinkenchiku Residential Design Competition 2005
Deadline: July 13, 2005
A call for entries that explore new potential in architecture through the design of "the residence, a place for human dwelling." Two architects, Tadao Ando and Richard Rogers, will serve as judges. Visit www.japan-architect.co.jp/english/5info/topics/skcompe2005/skcompe2005.html.

2005 Brick in Architecture Awards
Deadline: July 15, 2005
Licensed architects are encouraged to submit their best work completed since January 1, 2000, in which brick is the dominant building material. Visit www.gobrick.com for further information.

Unbuilt Architecture Design Awards
Deadline: July 19, 2005
Any architect, architectural educator, or architecture student anywhere in the world may submit unbuilt client-sponsored and/or theoretical projects. For information, visit www.architects.org/awards.

Juried Photo Exhibits at Build Boston
Deadline: August 1, 2005
All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. Visit www.architects.org/awards.

The 22nd Antron Fiber Design Award
Deadline: September 16, 2005
This award program recognizes designers who are setting new standards of creativity in commercial interior design through the innovative use of carpet. Visit www.antron.invista.com/designwards.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com.



CIRCLE 108 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 109 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

McGraw-Hill CONSTRUCTION ENR

ENR 2005 TOP FIRM LEADERS FORUM

REGISTER TODAY!

Constructing in the 21st Century:
New Ways to Think, New Ways to Build

June 14-15, 2005
Renaissance Chicago Hotel
Chicago

OPENING KEYNOTE SPEAKER:



General Barry R. McCaffrey,
Chairman, HNTB Federal Services



Sponsors: Construction 150 Year Anniversary · HARRIS NESBITT · HOULIHAN LOKEY HOWARD & ZUKIN · LIMBACH Since 1901 Consistently Exceeding Expectations · BENTLEY

The industry's leading contractors, engineers, architects, equipment and building product manufacturers—plus owners—will gather to discuss trends, innovations and business issues. The Forum's interactive panel discussions include:

- Program Metamanagement: The Next Level
- Productivity Improvement: It's Here, It's Real, and It's Up to You
- The People Side: Your AEC Workforce is Facing Technology-Driven Change
- Winning Teams! Companies Who Have Moved Up the Most on Their Respective ENR Top Lists

A Partial List of Confirmed Panelists include:

Charles Bacon, III, President and CEO, **Limbach Facility Services LLC**

Harvey M. Bernstein, V.P., Industry Analytics & Alliances, **McGraw-Hill Construction**

Ben Fergus, CIO, **CH2M-Hill**

Mike Kenig, Vice Chairman, **Holder Construction**

Charles B. Thomsen, FAIA, Chairman, **3D/I**

For a complete list of panelists or to register, visit the Forum website. **www.construction.com/event/**

Call: 212-904-4634 or E-mail: chuck_pinyan@mcgraw-hill.com

connecting people_projects_products

McGraw-Hill CONSTRUCTION
Dodge · Sweets · Architectural Record · ENR · Regional Publications

Find us online at www.construction.com

4/05

The McGraw-Hill Companies

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Pass the ARE 3.0. Study With Archiflash®

1 General data



Naisa

Get the NEW 2005 5th Edition. Celebrating Over 10 Years of Success. Prepare for the Architect Registration Exam with Archiflash. Each set contains 1,152 expertly written flashcards covering all six multiple choice tests: Pre-Design, General Structures, Lateral Forces, Mechanical & Electrical Systems, Building Design/Materials & Methods, and Construction Documents & Services. Learning is easy with timesaving charts, definitions, diagrams, and multiple choice Q&A. More information than you ever thought possible in an easy-to-use flashcard format. Only $99.95. Individual divisions available for $24.00 each. Order by phone or online.

800-411-7314
www.archiflash.com

| Circle Reader Service #150

Nylon Railing System

5 Metals



Handrail Design Inc.

HEWI® nylon railing system: Add a splash of color and a measure of strength to your next project with nylon-coated railings. Virtually maintenance free, HEWI® railings provide exceptional structural strength, chemical resistance and hygienic qualities. Choose tempered glass or perforated metal infill, colored nylon or solid wood handrails. Standard and custom designs available. Complete supply and installation service accessible throughout North America. HDI railing systems include inox™, CIRCUM™, HEWI Nylon, and d line™.

www.hdirailings.com

| Circle Reader Service #153

Gate Operators

2 Site construction



FAAC International, Inc.

FAAC is the world's largest specialized manufacturer of automated operators for swing, slide, and barrier gate systems. FAAC hydraulic operators meet or exceed strict European safety requirements as well as UL325 and CSA standards in North America. FAAC received ISO-9001 certification in 1996. Swing gate operators for residential and commercial applications include on-gate and in-ground versions that are famous for being small, but powerful. Barrier gates versions include a high-speed model (.8 sec.) for freeway use and a special model designed for heavy traffic wide entrances that require long beams (up to 23-ft.).

800-221-8278
www.faacusa.com

| Circle Reader Service #151

Customized Arches & Trims

6 Wood & plastics



Architectural Products by Outwater, LLC

As physically and creatively expansive as your imagination desires and your blueprints demand, Outwater offers the obvious time and cost saving alternative to manually fabricated, labor intensive wood and plaster decorative arches and trims with its revolutionary Library System. Comprising symmetrical left and right side semi-arches that can be readily cut and joined on site to form full arches with radius openings from 25-3/16-in. to 47-1/4-in., complementary integral trims and corresponding architectural elements can be interchanged and utilized in various combinations to create a truly customized installation.

800-835-4400
www.outwater.com

| Circle Reader Service #154

Commercial Grade Outdoor Furniture

2 Site construction



Modern Outdoor

High style, clean-lined simplicity, short lead times, environmentally conscious materials—these are the attributes of Modern Outdoor—a producer of top quality outdoor furniture with a definitive modern aesthetic. The Modern Outdoor Collections are commercial grade products designed for the restaurant, hospitality, and resort industries, with an aesthetic that is perfect for a residential client's backyard setting. The entirety of the Collection is made from Ipe, Electropolished Stainless Steel and Natural Composite materials. Modern Outdoor offers attractive pricing.

818-838-7060
www.modernoutdoor.com

| Circle Reader Service #152

Architectural Columns, Balustrades & Mouldings

6 Wood & plastics



Melton Classics, Inc.

Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, moldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers a maintenance-free balustrade product ideal for any application.

800-963-3060
www.meltonclassics.com

| Circle Reader Service #155

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASP

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Tall Wall Systems

6 Wood & plastics



Trus Joist, A Weyerhaeuser Business

Trus Joist's tall wall system offers architects, designers and builders, walls 10- to 30-ft. in height, allowing spacious, open floor plans. The design of a tall wall system using TimberStrand® LSL and Parallam® PSL technologies provides a wall that will start straight, stay straight and deliver predictable performance. Visit Trus Joist, A Weyerhaeuser Business at www.trusjoist.com or call 800-338-0515.

800-338-0515
www.trusjoist.com

Circle Reader Service #156

Fire-Rated Aluminum Doors & Windows

8 Doors & windows



Aluflam

Imagine being able to specify a fire-rated system that blends in so well with non-rated materials that you virtually can't tell them apart. Imagine the clean, rich lines of true extruded aluminum frames and large panels of clear glass. With ALUFLAM framing and VETROTECH SAINT-GOBAIN glass, this is reality. Contact them for further information. Fax number 714-899-3993. Email info@aluflam-usa.com.

714-899-3990
www.aluflam-usa.com

Circle Reader Service #159

Metal Wall Cladding

7 Thermal & moisture protection



ATAS International, Inc.

ATAS International Inc. introduces the INSPIRE Wall System, a new metal wall cladding made from .032 aluminum with tiny perforations in a heat absorbing surface. The premium finish is available in sixteen standard colors. Mounted a few inches from the main wall, on preferably a southern exposure, fresh air is drawn through the perforations and directed into the building with a fan and duct system. Air space between the walls also acts as an insulator. INSPIRE Wall is environmentally friendly, because it uses clean, natural energy.

800-468-1441
www.atas.com

Circle Reader Service #157

Double Action Doors

8 Doors & windows



Eliason

Easy Swing® Doors manufactured exclusively by Eliason Corporation. Model PMP-2 high impact traffic door reinforced throughout the impact area and back spline. Prevents cracking at hinge location and warping at swing edge. Strong, durable, and yet flexible enough to absorb the initial impact without the use of spring bumpers. Excellent for use in sales to stock room use. All doors are custom manufactured to your finished opening. Uses of doors range from sales to stock room, walk-in coolers, delis, secondary freezer doors, restaurants, or just personnel doors. Easy to install.

800-828-3655
www.eliasoncorp.com

Circle Reader Service #160

Metal Snow Guards

7 Thermal & moisture protection



East Coast Lightning Equipment

East Coast Roof Specialties, a Division of East Coast Lightning Equipment, introduces Ice-Brakes—metal snow guards for metal roofs. Their cast aluminum pad style snow guards are designed to prevent dangerous and destructive snow and ice avalanches from metal roofs by holding built-up snow in place. Ice-Brakes are low profile—projecting just over 1-in. from the surface of the roof. They cast little shadow and are less conspicuous than taller style snow guards. Ice-Brakes are installed with or without roof penetrations, and are handcrafted and economically priced.

860-379-9072
www.icebrakes.com

Circle Reader Service #158

High-Performance Translucent Building Systems

8 Doors & windows



Kalwall Corporation

Gathering LEED™ points through daylighting can greatly impact any project. Kalwall's highly insulating, diffuse-light transmitting, translucent skylights, wall systems and replacement windows are uniquely suited to achieve the desired results. The use of Kalwall can contribute points in the categories of Sustainable Sites, Energy & Performance, Materials & Resources, and Indoor Environmental Quality.

800-258-9777
www.kalwall.com

Circle Reader Service #161

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Hurricane-Resistant Glass

8 Doors & windows



Oldcastle Glass

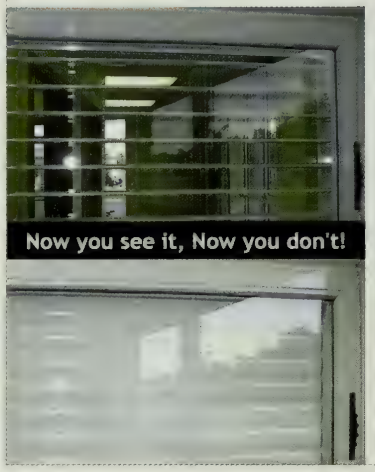
Featured on the Ritz-Carlton Club®, St. Thomas, StormGlass™—an Oldcastle Glass® exclusive—was chosen after other products failed. In independent testing, StormGlass™ met test requirements for large glass sizes of up to 50-sq.-ft. That means the freedom to design larger glazed openings while meeting the most stringent codes for hurricane resistance. StormGlass™ employs the industry's most advanced interlayer technology (the thinnest in the hurricane-resistant glazing market). The benefit? The highest level of protection without compromising the optical quality of the glass.

www.oldcastleglass.com

| Circle Reader Service #162

Pivoting Blinds

8 Doors & windows



Unicel Architectural Inc.

Unicel Architectural Inc. has developed a unique patented glazing product: Vision Control®. With this custom-designed unit, you can enjoy total control of light, privacy and sound without worrying about the cleaning. Unlike ordinary Venetian blinds, Unicel's pivoting blinds made of extruded aluminum are mounted inside a hermetically sealed glass unit offering you 100% dust-free and germ-free louvered glazing. Blinds are operated using a hand crank, thumbwheel, motorized switch or computer; cord-free and string free.

www.visioncontrol.qc.ca

| Circle Reader Service #165

Retractable Roof Enclosures & Operable Skylights

8 Doors & windows



OpenAire Inc.

Custom-designed retractable roof structures and operable skylights capable of spanning up to 140-ft. At the touch of a button, motorized panels retract to open up to 50% or more of the roof area. OpenAire can span up to 140-ft. and do custom designs (domes, barrel vaults, biparting, etc.) using its exclusive maintenance-free, thermally broken aluminum framing. These enclosures and operable skylights are perfect for indoor waterparks, pools, atria, and anywhere that you want to bring the outside in.

www.openaire.com

| Circle Reader Service #163

Wood Interior Windows & Doors

8 Doors & windows



Weather Shield Windows & Doors

Engineered with unique features and built for unparalleled performance, the Weather Shield Legacy Series is simply one of the best window and door lines available for custom and luxury homes. Available in tilt double-hung, casement, awning, and direct-set windows and French doors, the premium windows feature elegant wood interiors in a variety of wood species from Weather Shield's Custom Wood Interiors Collection™.

800-477-6808
www.weathershield.com

| Circle Reader Service #166

Fire-Rated Frames

8 Doors & windows



Technical Glass Products

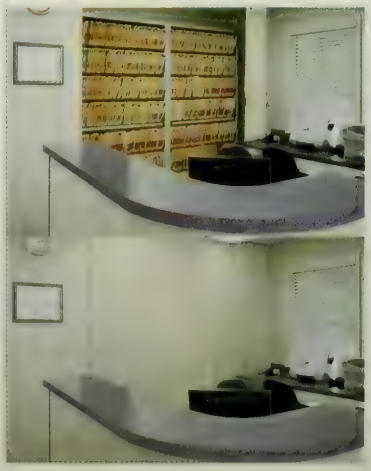
Technical Glass Products' Fireframes Hardwood Series provides an attractive fire-rated framing alternative for individual glass lites in sizes up to 31-sq.-ft. The Hardwood Series features an engineered core for dimensional stability and a thick hardwood face for unmatched beauty. The frames are available in a variety of wood species and come in complete packages for easy installation. Hardwood Series frames are available with fire ratings from 20 to 60 minutes.

888-397-3473
www.fireglass.com

| Circle Reader Service #164

Medical Office Accordian Doors

8 Doors & windows



Woodfold-Marco Mfg., Inc.

HIPAA Woodfold, a logical solution. Woodfold custom made accordion folding doors are a great solution for medical record storage areas. Totally suspended from overhead track, the Woodfold accordion folding door effectively creates a file storage room. Each Woodfold door is custom made exactly to size. 18 in-stock finishes are available for shipment within two to three weeks. Installation is quick and easy with minimal disruption within the medical office. Fax number 503-357-7185.

503-357-7181
www.woodfold.com

| Circle Reader Service #167

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Flood Barrier Shield for Doors

8 Doors & windows



Zero International, Inc.

A simple to install and remove barrier that helps in protecting doors from water ingress in flood-prone areas. Available in sections, to make ten- and 20-in.-high barriers — the aluminum shield requires no tools for easy insertion into pre-mounted vertical channels. The unit complies with (FEMA) and (FIA) regulations, for use on doors. The key to the shields impermeability is the use of closed cell sponge neoprene rubber that lines the aluminum channel brackets and the bottom of each shield section. Contact their Web site.

www.zerointernational.com

Circle Reader Service #168

Decorative Wall Panels

9 Finishes



Kemlite Company

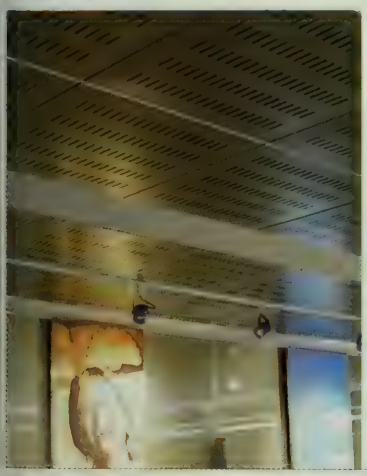
frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture resistant frp panel with a decorative finish that include a myriad of colors, patterns and woodgrains as well as a tile look panel. Available with over 500 hundred choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the Web.

888-332-6377
www.frpdesignsolutions.com

Circle Reader Service #171

Perforated Metal Ceilings

9 Finishes



Gage

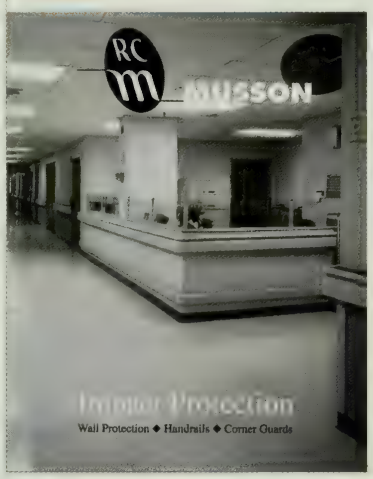
Setting a new standard for perforated metal ceilings, Gage introduces the 700 Series of perforated metal ceilings manufactured from 50% recycled aluminum. Standard designs include five distinctive finishes and 14 different perforation patterns. Selective and custom designs are also available. Contact the Gage factory for literature and samples.

www.gageceilings.com

Circle Reader Service #169

Impact Wall Protection

9 Finishes



Musson Rubber Co.

Musson has released a new catalog featuring the latest products in impact wall protection. They include flat wall guards in three heights for high-traffic areas. Also, handrails in three different profiles, sculpted, flat, and cylindrical, which meet ADA guidelines for safety and support. And surface-mounted corner guards in three styles to protect any possible corner situation. All are easily installed and constructed of heavy aluminum retainers.

800-321-2381
www.mussonrubber.com

Circle Reader Service #172

Cast Metal Wall Surfacing Material

9 Finishes



Gage

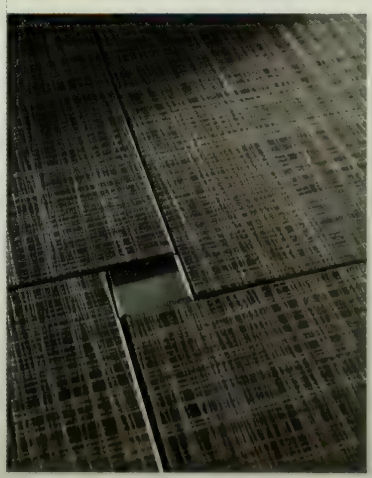
Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples.

www.gageverticalsurfacing.com

Circle Reader Service #170

Italian Clay Flooring

9 Finishes



Viva Ceramica

Colors meet the purest clays forged and pre-compacted in a higher than normal thickness (11-mm). Complete penetration between body and color grants lasting optical results, maximum ultimate tensile strength, and absolute resistance to acids, scratches, frost, and dirt. Using a totally environmentally-friendly manufacturing process, assured by ISO9001 quality system, the MELANGE series is guaranteed for 20 years for private homes and ten years for public areas. Created by Viva, daring to be different.

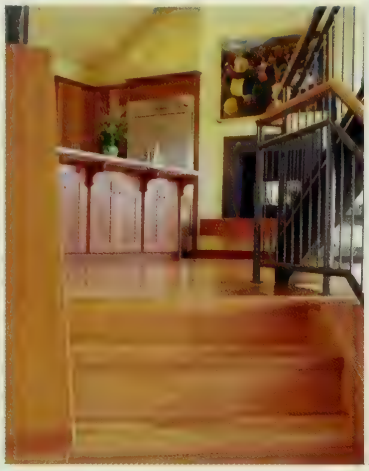
www.cerviva.it

Circle Reader Service #173

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Environmentally Responsible Hardwood

9 Finishes



Weyerhaeuser

Lyptus® is an environmentally responsible hardwood ideally suited for high-end flooring, cabinets, architectural millwork, residential and commercial furniture, among others. Its remarkable beauty features the fine grain of mahogany allowing it to take lighter or darker stains and finishes evenly such as: walnut, cherry, mahogany or maple. Better yet, Lyptus® is winning accolades from manufacturers who prefer to use an environmentally responsible hardwood. To learn more about Lyptus® products, call (877) 235-6873 or visit www.weyerhaeuser.com/lyptus.

877-235-6873
www.weyerhaeuser.com/lyptus

Circle Reader Service #174

Counter Support Brackets

10 Specialties



Rangine Corporation / Rakks

Rangine Corporation's counter support brackets provide an easy-to-install alternative to full-height laminated panels. Available in a range of sizes to support counters up to 30-in.-deep, brackets install easily into studs or blocking and can support loads up to 450-lb. Less expensive than laminated supports, they increase open space while improving handicapped access and ergonomics. Brackets can be ordered in either surface or flush mounted configurations to provide heavy-duty unobtrusive support. Manufactured of extruded structural aluminum.

508-376-4545
www.rakks.com

Circle Reader Service #177

Rain Resistant Louver Line Expanded

10 Specialties



Airolite

The AIROLITE Company is expanding its Storm Class™ wind-driven rain louver line to include a new product with superior rain resistance performance. New AIROLITE Louver Type SCH4 is a 4-in.-deep, horizontal, stationary blade louver rated under AMCA Standard 500-L-99, Wind Driven Rain Water Penetration Test. It expands AIROLITE's existing Storm Class™ product range, which includes 5-in.-, 6-in.-, 7-in.- and 8-in.-deep louvers. For more than 85 years, AIROLITE has served as the innovative leader in the design and manufacture of architectural louvers, grilles, screens and sun controls. For more information visit their web site or call.

740-373-7676
www.airolite.com

Circle Reader Service #175

Flexible Architectural Solutions

10 Specialties



Steelcase

Pathways Architectural Solutions integrate architecture, furniture and technology with an innovative construction process to create a better building and a more effective workplace. A better way to build for the future, the portfolio includes moveable walls, access floors, modular power and cabling and lighting solutions. A superior alternative to traditional construction that's simpler to build, easier to change, more environmentally responsible and much more cost-effective.

616-698-4027
www.steelcase.com

Circle Reader Service #178

Precast Concrete & Terrazzo Products

10 Specialties



DEX Studios

DEX manufactures precast architectural concrete and terrazzo products for commercial, multi-unit, and residential applications. Superior finishes and colors in both cast concrete and terrazzo are available in sinks, bathtubs, shower pans, tile, bar and countertops, tabletops and fireplaces. All DEX products are polished to a hard dense finish and sealed to protect the finished product. DEX offers a wide range of standard products, custom design capabilities and several Green products using post consumer recycled aggregates.

404-753-0600
www.dexstudios.com

Circle Reader Service #176

Wear-Resistant Furniture

12 Furnishings



Kwalu

Kwalu wall protection is the newest addition to a collection of virtually indestructible, scuff- and scratch-resistant furniture, tables and casegoods. Combining unsurpassed excellence in design with a 10-year warranty on construction and finish, Kwalu wall protection systems are ideally suited to the most challenging environments where striking elegance and effortless functionality is the dream. Call, or visit the Web site.

800-405-4331
www.kwalu.com

Circle Reader Service #179

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Curved Church Pews

12 Furnishings



New Holland Church Furniture

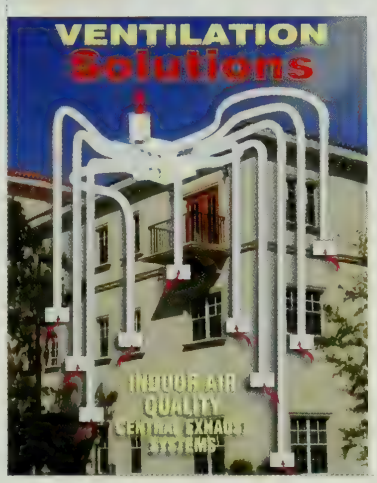
Curved pews are "Round For A Reason"™ and are designed and manufactured by New Holland Church Furniture. Curved pews are designed for maximum seating, curved for efficient use of space, designed to enhance worship, created for community, uniting the family of God. New Holland Church Furniture is a certified member of the Architectural Woodwork Institute (AWI), so you can be assured of the very highest quality. Email nhcw@newhollandwood.com.

800-220-1465
www.newhollandwood.com

Circle Reader Service #180

Exhaust Ventilation Systems

15 Mechanical



American Aldes Ventilation Corp.

American ALDES manufactures central bath and IAQ exhaust ventilation systems for multifamily housing. Similar to the popular ALDES single-family systems, the energy efficient MPV multiport ventilators prevent mold growth caused by activity based indoor humidity levels. The silent and low continuous background ventilation rates are controlled by the MPV Multi's self-regulating air duct system. This guarantees precise IAQ control and energy efficiency for the owner. Installers appreciate the pre-calibrated and self-balancing feature of the MPV system.

800-255-7749
www.americanaldes.com

Circle Reader Service #183

Translucent Rigid Panels

13 Special construction



American Acrylic Corporation

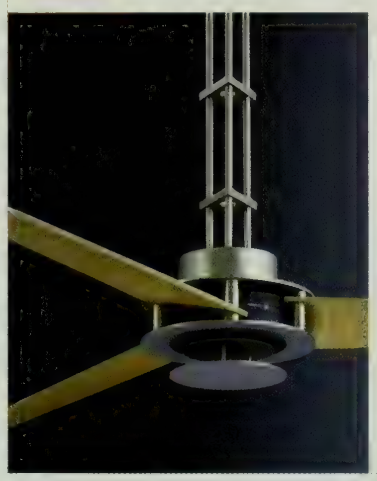
LUMAsite@ sheets and diffusers combine the durable beauty of acrylic with the shatterproof strength of glass fibers. These translucent rigid panels are available in elegant rice-paper, parchment and frosted effects, translucent whites, jade and sky tints, fabric embedments, and bright colors. In use internationally, U.S.-made LUMAsite@ sheets and diffusers offer architects and designers elegant choices for architectural and display lighting, partitions, illuminated walls, glazing panels, window treatments, sign backgrounds and much more.

800-627-9025
www.americanacrylic.com

Circle Reader Service #181

Architectural Ceiling Fans & Lighting

16 Electrical



G Squared

Balanced design that pleases the eye, and creates a mood and a gentle breeze. Moving sculpture: The San Francisco ceiling fan, a GOOD DESIGN Award winner. Whisper quiet, powerful and beautifully made, this timeless design can be used on 8-ft. ceilings or on cathedral ceilings with optional downrods up to 6-ft. long. Suitable for sloped ceilings up to 29 degrees. Lifetime warranty. To buy high-design architectural fans and lighting please visit G Squared's website or call between 7 A.M. and 6 P.M. PST.

877-858-5333
www.g2art.com

Circle Reader Service #184

X-Ray Radiation Shielding

13 Special construction



Fluke Biomedical, Radiation Management Services

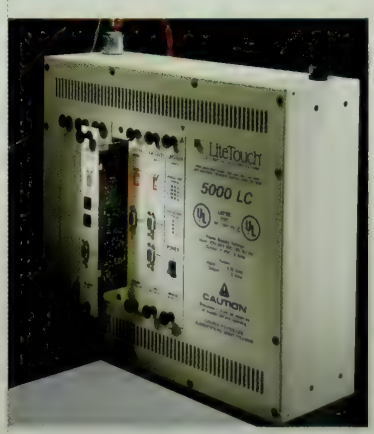
CLEAR-Pb® X-Ray Radiation Shielding from Fluke Biomedical, Radiation Management Services (formerly Nuclear Associates and Victoreen®) has the materials needed to win radiation shielding bid awards. Windowpanes come in multiple sizes and lead equivalences from 0.5 to 2.0mm with custom cutting available. CLEAR-Pb Modular and Mobile Barriers are shatter-resistant and ANSI approved. Lead Glass is also available in higher lead equivalences from 3.2mm up. Lead-lined window frames, doors, and drywall complete the products offering.

631-374-3180
www.flukebiomedical.com

Circle Reader Service #182

Lighting Control Systems

16 Electrical



LiteTouch

Look to LiteTouch for the most powerful lighting control system for new construction. The 5000LC CCU is unequaled for controlling large numbers of lighting loads and for easy, custom programming. Beautiful control stations allow for the control of any and every light in the house. This system integrates with virtually all other home automation systems from motorized window coverings to HVAC and security.

888-LITETCH
www.litetouch.com

Circle Reader Service #1

T: (212) 904-2021 | F: (212) 904-2074
Diane_Soister@McGraw-Hill.com

POSITIONS AVAILABLE

National Gypsum

Architectural Sales Account Executive

National Gypsum Company, a leading manufacturer in the building products industry, has an immediate need for an **ARCHITECTURAL SALES ACCOUNT EXECUTIVE** in the Atlantic and Northeast regional markets.

The National Gypsum name is well known throughout the building and construction industry. National Gypsum's Vision "is to be the best, absolute lowest-cost producer of the preferred products, quality and services, as determined by our customers".

Position Overview: The ASAE will be responsible for promoting NGC products, systems and brands to key architects, specifiers, and strategic accounts in the assigned areas. The ASAE will also share the quota responsibility for specification driven products in the assigned areas. They will be an active participant in local AIA, CSI, AWCI, SCIP, DBIA chapters in the assigned areas. In addition, conduct a large job program to assure NGC products are specified on major commercial construction projects. It will be their responsibility to monitor local building codes as well as develop relationships with local code officials. Last, the ASAE will assist the Manager of Technical Marketing in giving product knowledge training for newly hired sales associates as well as existing sales associates.

If interested, please apply at:
www.nationalgypsum.com/careers/

Aviation Architectural Professionals

PGAL, a national architectural, interiors, planning and engineering firm with offices in Alexandria (VA); Atlanta; Boca Raton; Dallas; Ft. Lauderdale; Houston; Las Vegas; Los Angeles; and Phoenix is in search of top-notch aviation architectural professionals.

Outstanding salary and benefit package and opportunities for advancement offered. Please send resume, portfolio and references to **Sharon Curtis, Human Resource Director, at: scurtis@pgal.com**

Visit our website at: www.pgal.com

ARCHITECT

Unique opportunity with dynamic, specialized architectural group. Downtown DC, near metro. Registration with 5-15 years strong architectural experience required. Excellent salary, commensurate with experience, and exceptional benefits. We're looking for an intelligent, articulate, and motivated self-starter. Chance to make a real difference while working on diverse and interesting projects. Travel required. To learn more about us please see www.accessibledesign.org. Qualified candidates should send a cover letter and resume to: careers@pva.org or Fax: (202) 416-7633. EOE.

ARCHITECTURAL MODEL MAKER

With AutoCad, Microstation and Rhinoceros exp. Pls send resume Polshek Partnership, Attn: P. Cheung 320 W. 13th St. NYC 10014

INTERIOR/COMMERCIAL DESIGNER

With experience & BA degree needed for busy Design Agency in Miami to plan, design & furnish interior environment of commercial spaces. Send resume to: A Vos Marques, LLC. 1200 West Avenue, Suite 726, Miami Beach, FL 33139 or fax to: (305) 534-0116.

JUNIOR ARCHITECT

Under close supervision of licensed architects: research & design buildings projects, plan layout, prepare scale drawings, assist in administrating contracts. BA/BS in Architecture required. Fax resumes to G. Dyer at 949-862-0289. Thomas P. Cox: Architects, Inc is an architecture firm in Irvine, CA

DRAFTER – INTERIORS

Maspeth, NY, 3 yrs. exp. req. Fax res to: Best Interiors Management Co. (718) 628-8892.

BUSINESS OPPORTUNITY

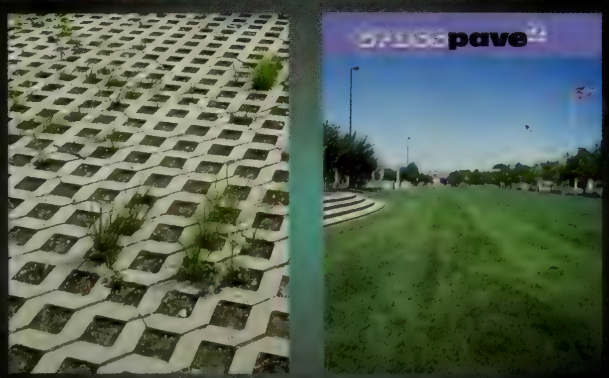
SPACE FOR LEASE:

Waltham-Landmark Bldg up to 240,000 Sq. Ft . will upfit. Great Natural Light 5,000 windows- 20 min. to Boston on the Charles R. Join other arch. and Engin. Call owner 781-893-7616.

SPECIAL SERVICES



Don't Do It Half-Grassed!



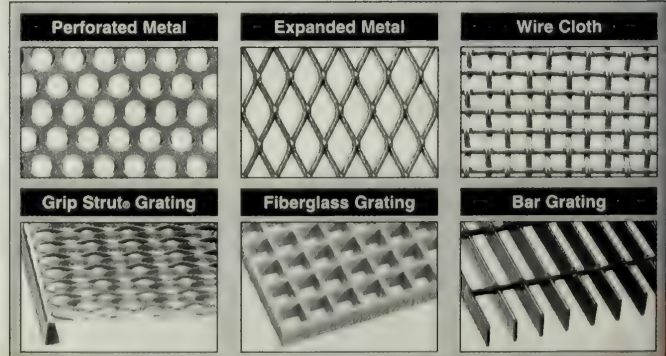
Grasspave2 (right) has 100% grass coverage, 5721 psi compressive strength, 92% void space for the healthiest root zone, and is made from 100% recycled plastic. Gravelpave2 (not shown) is beautiful too!

800-233-1510
invisiblestructures.com
Invisible Structures, Inc

CIRCLE 110 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Same Day Stock Shipment

Hole Products



Custom Fabrication to Your Specs!

Complete Hole Product inventories are available from Service Centers coast to coast in a variety of styles, sizes and materials.

The Hole Story®
ISO 9001:2000 Certified

Our website has complete product specifications, load tables, drawings, photographs and more.
www.mcnichols.com

1-800-237-3820

McNICHOLS CO.
e-mail: sales@mcnichols.com
www.mcnichols.com

CIRCLE 111 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Call for Presentations

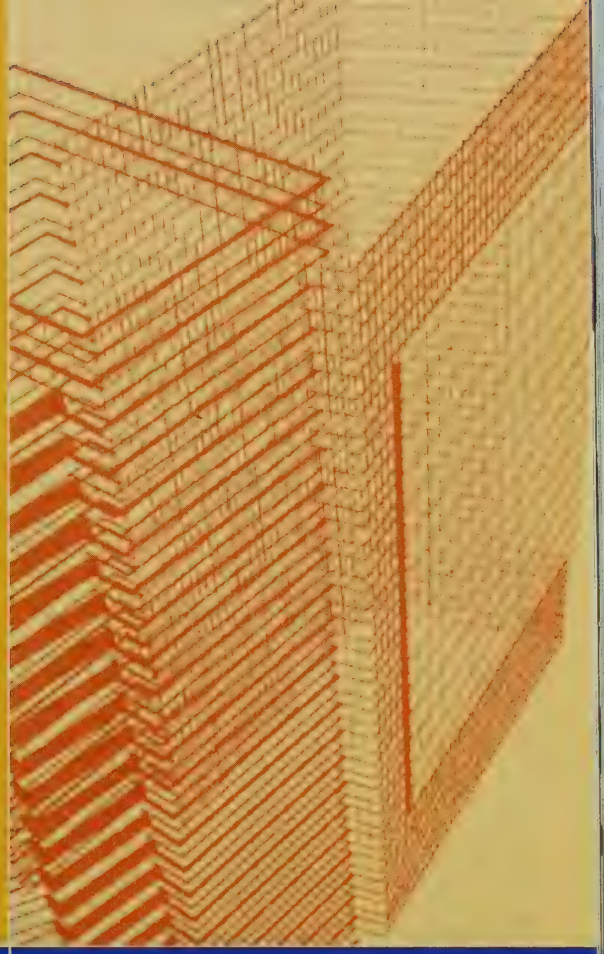
nd your place on the EDGE and hare your knowledge by presenting at e 2006 AIA Convention.

Become part of the collaborative network that will help architects and related professionals bring innovation to life through the power of design.

The Institute's annual convention empowers its members through knowledge sharing. This three-day event features:

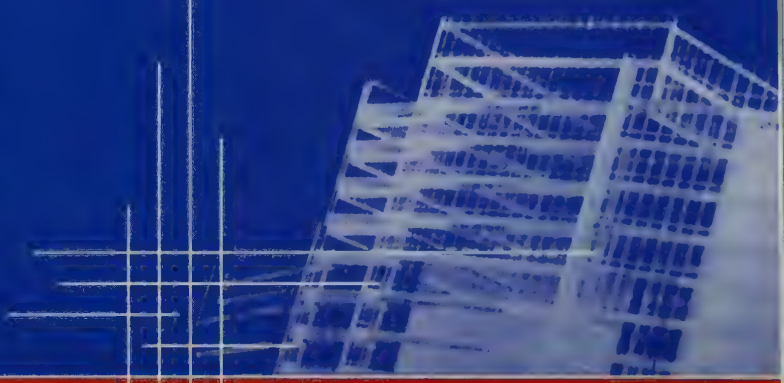
- Education sessions
- Networking opportunities
- Product and technology exhibits
- Tours.

Submit your proposal today for half- and full-day preconvention workshops and 60- and 90-minute seminars.



For more information or to submit a proposal online:

Visit *www.aia.org/conted_convention* and download the Call for Presentations (PDF). The deadline for submission of proposals is July 1, 2005. Selection will be made by September 30th.



A 2006 National Convention and sign Exposition

Angeles • June 8-10, 2006

chitecture on the Edge: novation...Engagement...Inspiration

AIA

226	*104*		3form *3-form.com*	**cov3**			Dell *dell.com*	**36**	*22*		LAM Lighting *lamlighting.com*
162	*64*		AAMA *aamanet.org*	**171**	*68*		Design Build Institute of America *dbia.org*	**41**	*28*	§	Laticrete International Inc *laticrete.com*
221	*97*		Academy of Art University *academyart.edu*	**224**	*100*		Doug Mockett & Company Inc *mockett.com*	**219**	*95*		Lightolier *lightolier.com*
225	*102*		Adams Rite Manufacturing Co *adamsrite.com*	**226**	*103*		Doug Mockett & Company Inc *mockett.com*	**223**	*99*		Llumar Window Film *llumar.com*
231			AIA *aia.org*	**184**	*77*	§	Ecophon Accoustic Ceilings *ecophon-us.com*	**22-23**	*15*		Loewen *loewen.com*
243			AIA *aia.org*	**189**	*78*		elliptipar *elliptipar.com*	**202**	*83*	§	Lonseal *lonseal.com*
174	*70*		AISC/American Inst of Steel Constr *aisc.org*	**34, 35**	*20, 21*	§	Ellison Bronze *ellison-bronze.com*	**2-3**	*2*	§	Lutron *lutron.com*
53	*35*	§	Alcoa Architectural Products *alcoacladdingsystems.com*	**220**	*96*	§	Englert *englertinc.com*	**197**	*81*	§	Lutron *lutron.com*
212	*142*		ALKCO Lighting *alkco.com*	**21**	*14*	§	EPIC Metals Corporation *epicmetals.com*	**177**	*72*		Marble Institute of America Inc, T *marble-institute.com*
165	*65*		Amer Soc of Landscape Architects *asla.org*	**39**	*26*	§	Fypon *fypon.com*	**50**	*33*		Marshfield DoorSystems *marshfielddoors.com*
139	*51*	§	American Marazzi Tile *marazzitile.com*	**114**	*47*	§	Georgia-Pacific *gp.com*	**44-45**	*30*		Marvin Windows & Doors *marvin.com*
46	*31*		Amtico Company *stratica.com*	**152**	*56*		Graboplan *graboplan.us*	**217**	*93*	§	MBCI *mbci.com*
178	*75*		APA: The Engineered Wood Assn *glulambeams.org*	**234**	*108*	§	Hafele *hafeleonline.com*	**113**			McGraw-Hill Construction *construction.com*
14			Architectural Record *archrecord.construction.com*	**40**	*27*		Harmonic Environments *harmonicenvironments.com*	**160B**			McGraw-Hill Construction *construction.com*
167	*66*		Architectural Woodwork Institute *awinet.org*	**cov4**	*113*	§	Haworth *haworth.com*	**178**			McGraw-Hill Construction *construction.com*
36	*23*		Ardee Lighting *ardeelighting.com*	**155**	*58*	§	High Concrete Structures Inc *highconcrete.com*	**235**			McGraw-Hill Construction *construction.com*
cov2-1	*1*	§	Armstrong *armstrong.com*	**195**	*147*	§	Hunter Douglas Contract *hunterdouglas.com*	**245**			McGraw-Hill Construction *construction.com*
161	*63*		Axium *axiumae.com*	**183**	*76*		IESNA *iesna.org*	**242**	*11*	§	McNichols Co *mcnichols.com*
19	*12*	§	B-K Lighting *bklighting.com*	**157**	*60*	§	Indiana Limestone Company *indianalimestonecompany.com*	**8-9**	*6*		Metal Initiative, The *themetalinitiative.com*
224	*101*		Bear Creek Lumber *bearcreeklumber.com*	**112A-D**		§	InPro Corporation *inprocorp.com*	**24**	*16*		Mitsubishi Chemical America Inc *alpolic-usa.com*
228	*105*	§	Belden Brick Company, The *beldenbrick.com*	**42-43**	*29*	§	InterEdge Technologies *firesafe-glass.com*	**54**	*36*	§	Mortar Net *mortarnet.com*
71	*43*	§	Benjamin Moore *benjaminmoore.com*	**20**	*13*		International Code Council *iccsafe.org*	**232**			National Building Museum *nbm.org*
233			BNi Building News *bnibooks.com*	**175**	*71*		International Code Council *iccsafe.org*	**179**	*73*	§	National Terrazzo & Mosaic Assn *ntma.com*
160	*62*	§	Bradley Corporation *bradleycorp.com*	**242**	*110*	§	Invisible Structures Inc *invisiblestructures.com*	**173**	*69*		NECA/IBEW *thequalityconnection.org*
15	*9*	§	C/S Group *c-sgroup.com*	**158**	*61*	§	IR Security & Safety *irsecurityandsafety.com*	**147**	*54*		Nevamar Decorative Surfaces *nevamar.com*
134	*50*	§	Cambridge Architectural Mesh *architecturalmesh.com*	**112**	*46*		Italian Trade Commission *marblefromitaly.com*	**160C**	*115*		NJ SmartStart Buildings *njsmartstartbuildings.com*
160D	*116*		Carvart *carvart.com*	**36**	*22,23*		JJI Lighting Group *jjilightinggroup.com*	**216**	*92*	§	Pawling *pawling.com*
234	*109*		Cascade Coil Drapery *cascadecoil.com*	**212**	*89*		JJI Lighting Group *jjilightinggroup.com*	**245**	*112*		Pemko *pemko.com*
181	*74*		Cedar Shake & Shingle Bureau *cedarbureau.org*	**55**	*37*		Johnson Controls *johnsoncontrols.com*	**160A**	*114*	§	PGT Industries *pgtindustries.com*
37	*24*	§	CENTRIA Architectural Systems *centria.com*	**209**	*86*	§	Johnsonite *johnsonite.com*	**49**	*32*	§	Pilkington *pilkington.com*
210	*87*		Cherry Tree Design *cherrytreedesign.com*	**31**	*19*		Kim Lighting *kimlighting.com*	**214**	*91*	§	Pittsburgh Corning *pittsburghcorning.com*
56	*38*		CNA/Victor O Schinnerer & Co Inc *schinnerer.com*	**76**	*44*	§	Knauf *knauffiberglass.com*	**10-11**	*7*	§	PPG *ppgglass.com*
132	*49*		Cooper Lighting *cooperlighting.com*	**208A-B**			Kohler *kohler.com*	**222**	*98*		Promosedia *promosedia.it*
154	*57*	§	CPI International *cpidaylighting.com*	**61**	*41*		Kolbe & Kolbe Millwork Co Inc *kolbe-kolbe.com*	**38**	*25*		Quilite *quilite.com*
213	*90*	§	CR Laurence Co Inc *crlaurence.com*	**246**	*117*		Koreteck *koreteck.com*	**60**	*40*	§	Roppe Corporation *roppe.com*
169	*67*		CSI/Construction Specifications Inst *csinet.org*	**156**	*59*		KraftMaid Cabinetry *kraftmaid.com*	**206**	*85*	§	SAFTI/O'Keeffes Inc *safti.com*
141	*52*	§	DaVinci Roofscapes *davinciroofscapes.com*	**4**	*3*	§	Kusser Aicha Graniteworks USA *kusserUSA.com*	**69**	*42*		Samsung Staron *getstaron.com*
205	*84*		Decoustics *decoustics.com*	**229**	*106*		@Last Software *sketchup.com*	**29**	*18*		Samsung-Digital Information Tech *samsungproav.com*

For additional information on these advertisers, circle corresponding number on Reader Service Card, or go to archrecord.construction.com/products.
To reserve your 2005 Sweets call 1-800-442-2258

ADVERTISERS INDEX continued

27	17	●	Schott Corporation us.schott.com
191	79	●	Sherwin-Williams sherwin-williams.com
201	82		Simplex Ceilings simplexceilings.com
143	53	●	Simpson Strong-Tie Company Inc simpsonstrongwall.com
218	94		Skyline Design skydesign.com
131	48	●	Sloan Valve Company sloanvalve.com
48A-F	118		Steelcase steelcase.com
230	107		Stone River Bronze stoneriverbronze.com
227			Sweets sweets.construction.com
211	88		TAMKO Roofing Products lamarite.com
5	4		Technical Glass Products fireglass.com
59	39		Thermador thermador.com
32, 33		●	USG Corporation usg.com
149	55		VETROTECH vetrotech.com
12	8		Visa Lighting visalighting.com
16	10		VT Industries vtindustries.com
77	45	●	Wausau Window and Wall Systems wausauwindow.com
6-7	5		Weather Shield Windows & Doors weathershield.com
52	34		Westcrowns Inc westcrowns.com
18	11	●	YKK AP America Inc ykkap.com

SALES OFFICES & CONTACTS

EXECUTIVE OFFICES

James H. McGraw, IV, Group Publisher
(212) 904-4048 Fax: (212) 904-3695
jay_mcgraw@mcgraw-hill.com

Laura Viscusi, VP, Associate Publisher
(212) 904-2518 Fax: (212) 904-2791
lviscusi@mcgraw-hill.com

Assistant: Pina Del Genio
(212) 904-6791 Fax: (212) 904-2791
pina_delgenio@mcgraw-hill.com

ONLINE SALES

Paul Cannella, Director
(312) 233-7499 Fax: (312) 233-7490
paul_cannella@mcgraw-hill.com

CLASSIFIED SALES

Diane Soister
(212) 904-2021 Fax: (212) 904-2074
diane_soister@mcgraw-hill.com

NORTHEAST / MID-ATLANTIC

Janet Kennedy (CT, MA, ME, NH, NJ, NY, PA, RI, VT)
(212) 904-3603 Fax: (212) 904-2791
janet_kennedy@mcgraw-hill.com

Joe Sosnowski (NJ, PA)
(610) 278-7829 Fax: (610) 278-0936
joseph_sosnowski@mcgraw-hill.com

MIDWEST

Mike Gilbert (AR, IL, IA, MN, MO, OH, W.PA, WV)
(312) 233-7401 Fax: (312) 233-7403
mike_gilbert@mcgraw-hill.com

Lisa Nelson (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 233-7402 Fax: (312) 233-7403
lisa_nelson@mcgraw-hill.com

SOUTHEAST / MID-ATLANTIC

Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com

WEST (AZ, CA, CO, NM, NV)

Bill Hague
(253) 858-7575 Fax: (253) 858-7576
(760) 340-5575 Fax: (760) 340-0439
bill_hague@mcgraw-hill.com

WEST (ID, MT, OR, S.CA, UT, WA, WY)

Bill Madden
(503) 224-3799 Fax: (503) 224-3899
bill_madden@mcgraw-hill.com

INTERNATIONAL

Glen Wither (Canada)
(888) 836-6623 Fax: (866) 212-2213
glen_wither@mcgraw-hill.com

Martin Drueke (Germany)
(49) 202-27169-12 Fax: (49) 202-27169-20
drueke@intermediapartners.de

Ferruccio Silvera (Italy)
(39) 022-846716 Fax: (39) 022-893849
ferruccio@silvera.it

Katsuhiro Ishii (Japan)
(03) 5691-3335 Fax: (03) 5691-3336
amskatsu@dream.com

Young-Seoh Chin (Korea)
(822) 481-3411/3 Fax: (822) 481-3414

PRODUCT NEWS SPOTLIGHTS / POSTCARD SERVICE

Deidre Allen
(212) 904-2010 Fax: (609) 426-7136
deidre_allen@mcgraw-hill.com

SUBSCRIBER SERVICE

(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64cs@mcgraw-hill.com

BACK ISSUES

(212) 904-4635
phyllis_moody@mcgraw-hill.com

REPRINT MANAGEMENT SERVICES

(800) 360-5549 x129
architecturalrecord@reprintbuyer.com

McGraw-Hill CONSTRUCTION Architectural Record

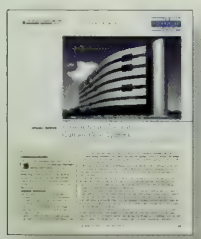
CONTINUING EDUCATION AIA

Read *Record* for Credit

Every issue of McGraw-Hill Construction's *Architectural Record* features one or more Continuing Education self study courses.

- **Read** the designated article or sponsored section in the magazine and on **archrecord.construction.com**.
- **Answer** test questions on the separate Reporting Form for each article or section.
- **Fill out** each Reporting Form in the magazine or on the web site, and mail or fax with the processing fee to the address on the form to register for credit. Certificates of Completion are available.
- **Earn** one learning unit for each self study course including one hour of HSW credit.

For CES credit questions, call **877-876-8093.**



connecting people_projects_products

McGraw-Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications

Find us online at www.construction.com

The McGraw-Hill Companies



5 Year Guarantee On Electrical Modification.

Strongest Warranty In The Industry.

Designed To Bear Extreme Weight.

PEMKO HINGE PEMKO

800.283.9988 www.pemko.com 800.824.3018

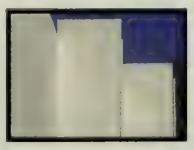
CIRCLE 112 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



SOLID IS JUST BETTER.

The Koreteck™ Panelized Building System replaces metal studs, insulation and exterior sheathing with the superior performance of a solid noncavity wall. The proven benefits of the system include faster installation, higher R-Values, less waste, better sound insulation and mold resistance. Discover more about the solid core, solid system and solid thinking of Koreteck by calling or visiting us on the Web today.





KORETECK™
PANELIZED BUILDING SYSTEM

SOLID THINKING™

866-877-8335 • www.koreteck.com

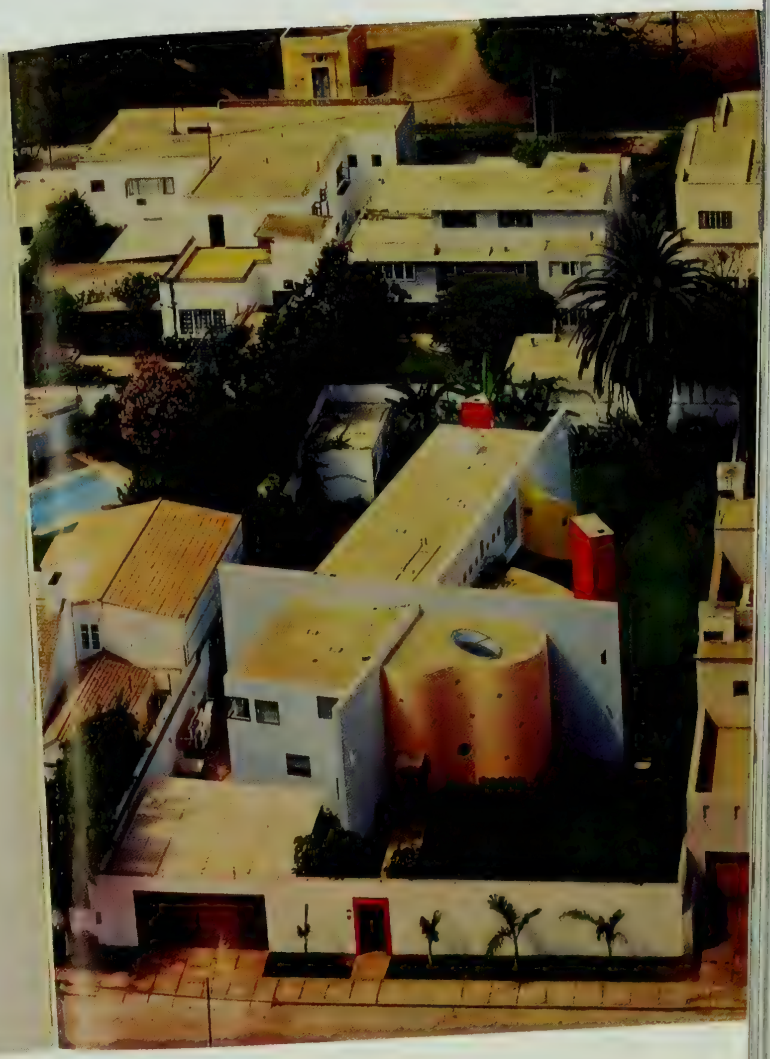
A BlueScope Steel Company

©2005 K

CIRCLE 117 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

In a secret garden

Casa Los Andes
Lima, Peru
Arquitectonica International, Architects



From the pages of ARCHITECTURAL RECORD 1986

Same House, More Yard

By Sam Lubell

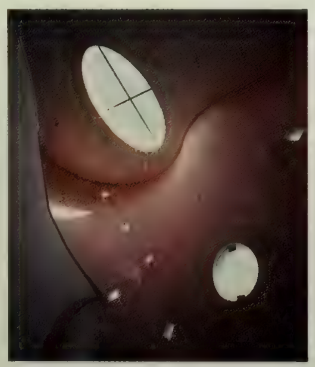


For future generations seeking a symbol of playful 1980s architecture, one case study should surely be Arquitectonica's 1984 Casa Los Andes, in Lima, Peru. The bright red, yellow, pink, and white structure, a crucifix form composed of a cluster of intersecting planes and curved volumes, was designed for Arquitectonica partner Bernardo Fort-Brescia, FAIA's sister, her husband, and two small children. Gardens surrounding the 3,500-square-foot house can be glimpsed from the interior through diamond-shaped, circular, triangular, and elliptical windows; oval skylights further animate the space. Inside, multiuse rooms and straightforward circulation yield simple living spaces, despite the house's subtly shifting axes. Visual manipulation—including changes in color and scale, and the creation of internal view corridors—give the four separate areas of the interior a distinct atmosphere. Outside, the grounds contribute to the unique character of each quadrant: The entrance garden, to the southeast, brims with roses; the southwest patio, which includes a car entrance, is more utilitarian; the northwest contains a courtyard with fruit trees; and the northeast quadrant,



This page: The house's whimsical forms and bright colors (above) are complemented by the fanciful hallway windows and skylights visible in the interior (below).

Previous page: The house originally had a much smaller yard (top). Expanded landscaping includes a pool (bottom).



(continued from previous page) protected at the rear from tropical winds, is the most lush.

Casa Los Andes owners Jan Mulder and Sylvia Fort have been diligent in preserving its original spirit. Any change in furniture, layout, artwork, or maintenance elicits a call to the architects for approval. So the house has changed little. Only one major alteration has occurred: the enclosure of a breezeway between the study and dining room, with sliding glass doors to keep Lima winters at bay.

The northeast garden was expanded about five years after completion by annexing an adjacent lot. This area has become what Fort-Brescia calls a "romantic garden," rather than the more tightly arranged spot it once was. The yard now includes a rich assortment of trees along its perimeter, including 15 types of palm, as well as apple, peach, and avocado. Bougainvillea and geraniums bloom here, amid contemporary Peruvian sculptures in bronze, marble, and ceramic. Only about a month ago, one of the most dramatic changes reached completion: An 82-foot-long pool now extends from the central breezeway into the garden. Off-white travertine marble has replaced the expanded terrace's dark, local stone, called Laja, which tended to scorch bare feet. To maintain uniformity, the owners made the same marble substitution where Laja originally lined the house's entryway. Finally, a small new garage stands within the expanded garden, but remains intentionally discreet, respecting the country's strong feelings against ostentation.

The house, says Fort, has been a wonderful place to live, providing bright color and copious light in a country where much of the year is gray. Its moderate size makes it practical, requiring minimal maintenance, while it remains cozy, even with the children grown and the nest empty. ■

Work without boundaries.
Create without boundaries.





Dell recommends Microsoft® Windows® XP Professional

be® Video Collection Standard
re, documentation or
ing may vary from retail version

goodbye to creative constraints. Dell™ and Adobe® have joined forces to help provide solutions for your creative needs. Dell Precision™ workstations feature the latest ® processors, loads of memory, and PCI Express™ x16 2-D and 3-D graphics cards, making them powerful enough to handle large graphics files quickly and deliver stunning visual cts. Best of all, Adobe has a range of Dell ISV-certified software options, including the new comprehensive Adobe® Video Collection 2.5 Standard. Simple solutions, so all you to do is be creative.

Limited time offers.

DELL PRECISION™ 470 WORKSTATION

Scalable, Dual Processor Capable Workstation
- Intel® Xeon™ Processor (2.80GHz, 1MB Cache, 800MHz FSB)
- Microsoft® Windows® XP Professional
- 1GB Dual-Channel DDR2 SDRAM
- 160GB* (7200 RPM) SATA Hard Drive
- 128MB ATI FireGL™ V3100 PCI Express™ x16 Graphics Card
- 48x CD Burner/DVD Combo Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* On-Site Service,* Tech Support)
- Monitor Not Included

$1699 Lease as low as **$45**/mo. (48 pmts*)
E-VALUE Code: 03102-S40616m

Recommended Upgrades:
- 3-Yr Business Essential Service Plan (includes 24x7 Same-Day On-Site Service,* advanced Tech Support), add $408
- Dell™ UltraSharp™ 1905FP 19" Flat Panel Display, add $499

DELL PRECISION™ M20 WORKSTATION

Workstation Performance, Notebook Mobility
- Featuring Intel® Centrino™ Mobile Technology with Intel® Pentium® M Processor 730 (1.60GHz, 2MB L2 Cache, 533MHz FSB); Intel® PRO/Wireless Card
- Microsoft® Windows® XP Professional
- 14.1" SXGA+ Active Matrix Display
- 512MB DDR2 SDRAM
- 60GB* (5400 RPM) Hard Drive
- ATI Mobility™ FireGL™ V3100 64MB PCI Express™ OpenGL Graphics
- 8x DVD-ROM Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* Tech Support)

$1999 Lease as low as **$53**/mo. (48 pmts*)
E-VALUE Code: 03102-S40619m

Recommended Upgrades:
- 80GB* (5400 RPM) Hard Drive, add $80
- 3-Yr Business Standard Service Plan (includes On-Site Service,* CompleteCare™ Accidental Damage Service,* advanced Tech Support), add $278

Dell recommends Adobe® software with Dell Precision™ workstations.

Adobe® Video Collection 2.5 Standard

- Package includes Adobe Premiere® Pro 1.5, Adobe After Effects® 6.5 Standard, Adobe Audition™ 1.5, and Adobe Encore™ DVD 1.5.

Special offer only with purchase of select Dell Precision™ Workstations*
Only **$599** Great Value!

Operate with powerful, next-generation digital imaging features that are the professional standard for graphic and web designers, photographers, and video professionals.
$649 SKU A0176740

Add stunning 2D and 3D compositing, animation, and visual effects as well as motion tracking and stabilization to production.
Standard Version
$728 SKU A0369456

Revolutionizes non-linear video editing with real-time tools that provide precise management of virtually every aspect of video and audio editing.
$729 SKU A0256041

FREE 3-5 Day Shipping* with purchase of select business systems. Call or go online for eligible systems.

Get more out of creativity. Get more out of now.

CALL 888.798.7563 toll free **CLICK www.dell.com/SMB/DCCsolutions**

-F 7a-8p Sat 8a-5p, CT

g/Availability: Pricing, specifications, availability, and terms of offer may change without notice. Taxes, fees and shipping and handling charges, except for free shipping offer, extra, vary, and not subject to discount. Offers may be combined with other select offers or ts. U.S. Dell Small Business new purchases only. LIMIT 5 DISCOUNTED OR PROMOTIONAL ITEMS PER CUSTOMER. In case of customers leasing under these promotions, please note that items leased will be subject to applicable end-of-[illegible] not be responsible for pricing or other errors, and reserves the right to cancel orders arising from such errors. **Warranty:** For a copy of our Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One Dell Way, Round Rock, Texas 78682. For more ion, visit http://www.dell.com/warranty. **On-Site Service:** Service may be provided by third-party. Technician will be dispatched, if necessary, following phone-based troubleshooting. Subject to parts availability, geograp[illegible] timing dependent upon time of day call placed to Dell. **Leasing:** Monthly payment based on 48-month Fair Market Value ("FMV") QuickLease and does not include taxes, fees and shipping and handling charges. Your monthly payment may vary, depe[illegible] orthiness. QuickLease arranged by Dell Financial Services L.P. ("DFS"), an independent entity, to qualified Small Business customers. Minimum transaction size of $500 required. At the end of the FMV Qu[illegible] e lease or return the equipment to DFS. Please contact your DFS representative for further details. All terms subject to credit approval and availability, and are subject to change without notice. **CompleteCare Accidental Damage Service:** CompleteCare service s theft, loss, and damage due to fire or intentional damage. CompleteCare not available in all states. Customer may be required to return unit to Dell. For complete details, visit www.dell.com/servicecontracts. **Hard Drive:** For hard drives, GB means 1 billion bytes. apacity varies with preloaded material and operating environment and will be less. **Free 3-5 Day Shipping:** Free shipping is lowest cost (3-5 day) shipping. Valid for U.S. Small Business new purchases only. Available in [illegible] shipping, minimum purchase thresholds may apply. Call or go online for details. Systems free shipping offers exclude Software and Peripheral (S&P) orders under $59; all S&P orders placed by phone; and S&P orders placed on systems configuration pages. [illegible] offers apply to S&P orders purchased in the S&P Online store and/or by phone. Free shipping on S&P does not apply to S&P in the online system configuration pages, but can be combined with other offers. **Trademark/Copyright Notices:** [illegible] UltraSharp, CompleteCare and Dell Precision are trademarks of Dell Inc. Intel, Intel Centrino, Intel Xeon and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are rks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Adobe, the Adobe Logo and Acrobat are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States and/or [illegible] All rights reserved.



HAWORTH®
change by design

www.haworth.com 866.833.4343

CIRCLE 113 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

itectural Record
5 July

TECTURAL RECOR

3 9042 06432655 3



Powerful Abstraction
Defines Eisenman's
erlin Holocaust Memorial

BURLINGAME
JUL 25 2005
LIBRARY

Residential Section:
Building With Metal

CEILING | SYSTEMS

[Between us, ideas become reality.™]



Our ceiling recycling program is growing.

The Armstrong Ceiling Recycling Program was designed to protect our environment by providing a better way to dispose of old ceiling materials. We'll pick up old acoustical ceilings from renovation projects and take them to one of our manufacturing sites to be recycled into new Armstrong ceilings. This closed-loop, one-of-a-kind program can help save on landfill and transportation costs. And your efforts can even help you achieve LEED® construction waste credits. It's an idea that's growing in popularity.

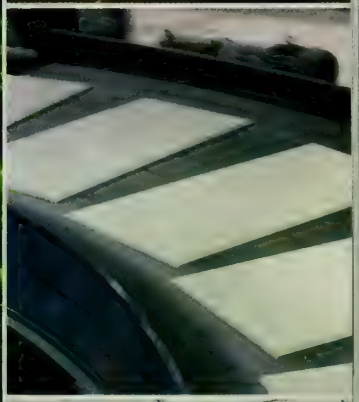
1-877-ARMSTRONG

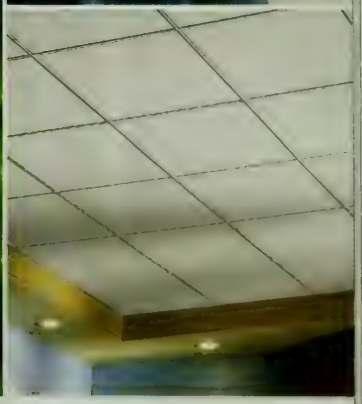
armstrong.com/environmental

LEED® is a registered trademark of the United States Green Building Council.





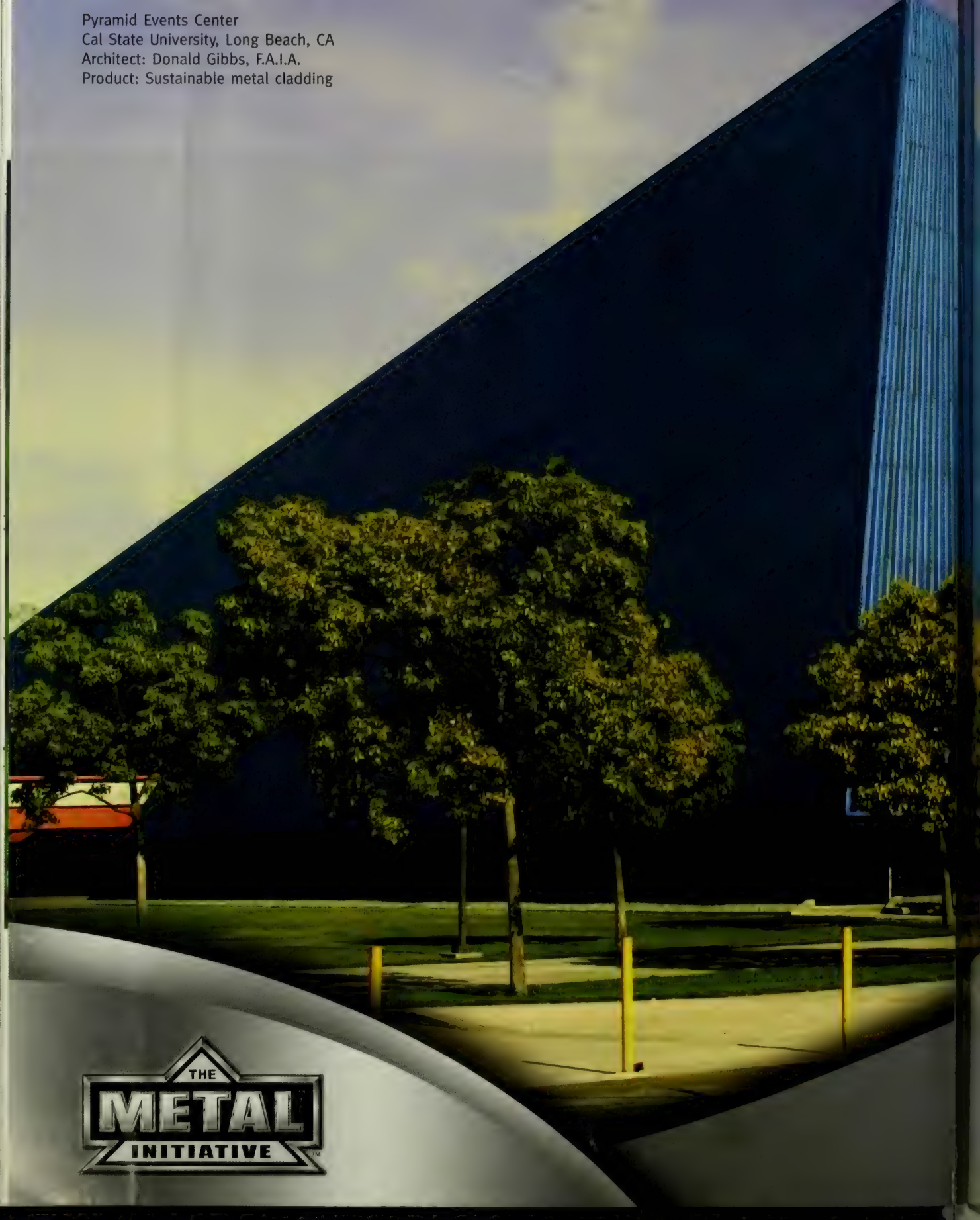


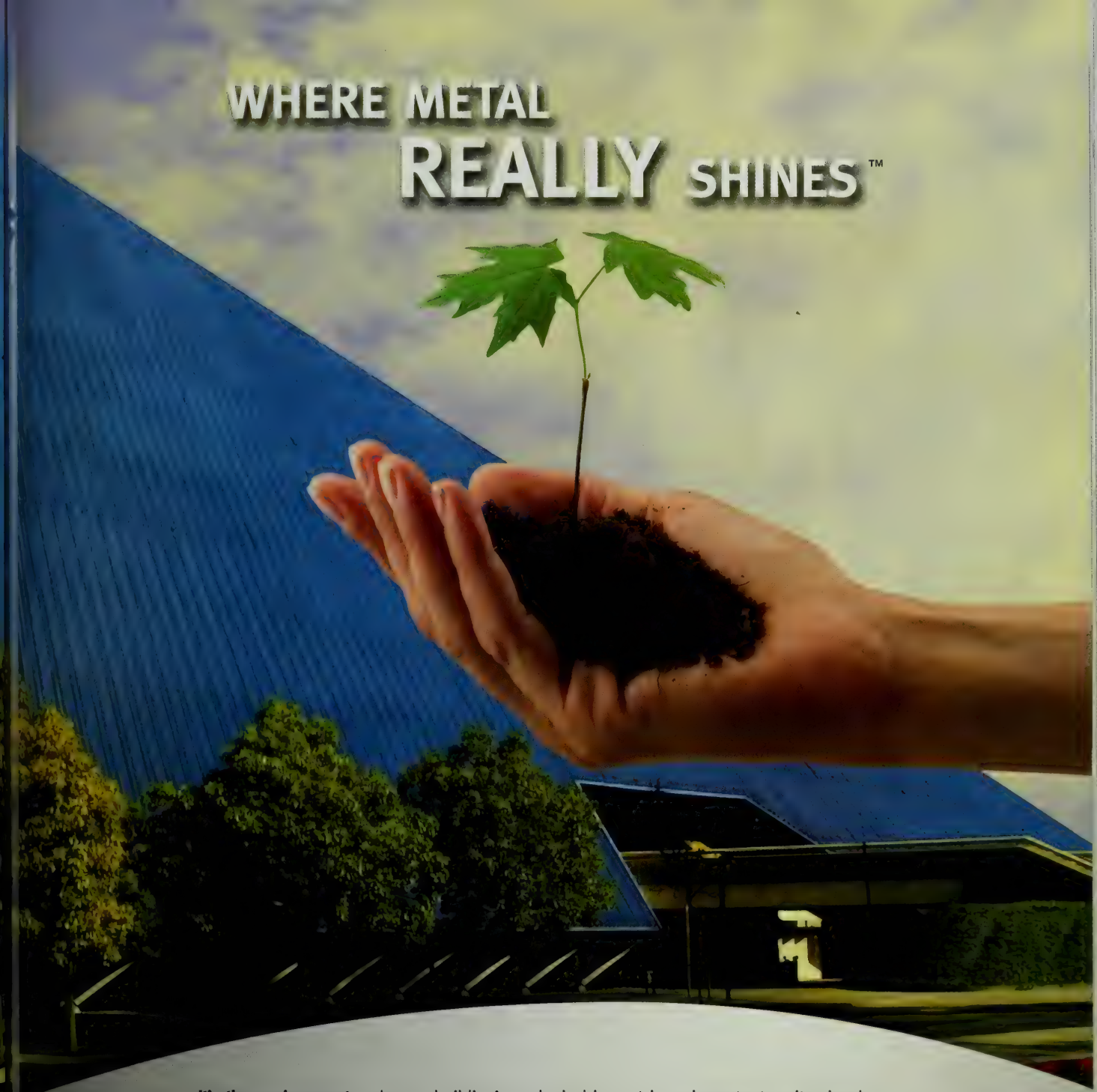


Armstrong

CIRCLE 1 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Pyramid Events Center
Cal State University, Long Beach, CA
Architect: Donald Gibbs, F.A.I.A.
Product: Sustainable metal cladding





It's the environment—where a building's ecological impact is as important as its visual impact. Nearly 100 million tons of metal are recycled in the U.S. annually, more than all other materials combined, including glass and paper.

In LEED® assessment, metal is a must-have "green" material. A typical metal cladding has at least 25% recycled content and at the end of its long life is 100% recyclable. Being inert, metal has no adverse effect on atmospheric or indoor air quality.

Cool metal roofing significantly reduces a building's long-term energy use. With heat-deflecting metal coatings, HVAC costs can drop 40% or more! Metal also affords maximum design freedom with dramatic shapes, surface textures and colors, so buildings better complement their environments.

Visit our web site for more on the green benefits of metal. Plus, information on metal construction products, case histories, photos, news, related links, and more. See where metal really shines at: **www.themetalinitiative.com**

® LEED is a registered trademark of the U.S. Green Building Council.

CIRCLE 2 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The
Premier
Source
for
Custom
Site
Furniture

Your
Design.
Landscape
Forms
Quality.

landscapeforms
800.430.6208 landscapeforms.com

CIRCLE 3 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
MANAGING EDITOR	Beth Broome, *elisabeth_broome@mcgraw-hill.com*
DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
DEPUTY EDITORS	Clifford A. Pearson, *pearsonc@mcgraw-hill.com*
	Suzanne Stephens, *suzanne_stephens@mcgraw-hill.com*
	Charles Linn, FAIA, Profession and Industry, *linnc@mcgraw-hill.com*
SENIOR EDITORS	Sarah Amelar, *sarah_amelar@mcgraw-hill.com*
	Sara Hart, *sara_hart@mcgraw-hill.com*
	Deborah Snoonian, P.E., *deborah_snoonian@mcgraw-hill.com*
	William Weathersby, Jr., *bill_weathersby@mcgraw-hill.com*
	Jane F. Kolleeny, *jane_kolleeny@mcgraw-hill.com*
PRODUCTS EDITOR	Rita Catinella Orrell, *rita_catinella@mcgraw-hill.com*
NEWS EDITOR	Sam Lubell, *sam_lubell@mcgraw-hill.com*
DEPUTY ART DIRECTOR	Kristofer E. Rabasca, *kris_rabasca@mcgraw-hill.com*
ASSOCIATE ART DIRECTOR	Clara Huang, *clara_huang@mcgraw-hill.com*
PRODUCTION MANAGER	Juan Ramos, *juan_ramos@mcgraw-hill.com*
WEB EDITOR	Randi Greenberg, *randi_greenberg@mcgraw-hill.com*
WEB DESIGN	Susannah Shepherd, *susannah_shepherd@mcgraw-hill.com*
WEB PRODUCTION	Laurie Meisel, *laurie_meisel@mcgraw-hill.com*
EDITORIAL SUPPORT	Linda Ransey, *linda_ransey@mcgraw-hill.com*
	Monique Miller, *monique_miller@mcgraw-hill.com*
COPY EDITOR	Leslie Yudell
ILLUSTRATOR	I-Ni Chen
EDITORIAL ASSISTANTS	Larissa Babij
EDITOR AT LARGE	James S. Russell, AIA, *jamesrussell_editor@earthlink.net*
CONTRIBUTING EDITORS	Raul Barreneche, Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Nancy Levinson, Thomas Mellins, Robert Murray, Sheri Olson, FAIA, Nancy B. Solomon, AIA, Michael Sorkin, Michael Speaks, Ingrid Spencer
SPECIAL INTERNATIONAL CORRESPONDENT	Naomi R. Pollock, AIA
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz
GROUP PUBLISHER	James H. McGraw IV, *jay_mcgraw@mcgraw-hill.com*
VP, ASSOCIATE PUBLISHER	Laura Viscusi, *laura_viscusi@mcgraw-hill.com*
VP, MARKETING AND BUSINESS DEVELOPMENT	David Johnson, *dave_johnson@mcgraw-hill.com*
VP, GROUP EDITORIAL DIRECTOR	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
GROUP DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
DIRECTOR, CIRCULATION	Maurice Persiani, *maurice_persiani@mcgraw-hill.com*
	Brian McGann, *brian_mcgann@mcgraw-hill.com*
DIRECTOR, MARKETING COMMUNICATION	Chris Meyer, *chris_meyer@mcgraw-hill.com*
DIRECTOR, MULTIMEDIA DESIGN & PRODUCTION	Susan Valentini, *susan_valentini@mcgraw-hill.com*
MANAGER, ADVERTISING PRODUCTION	Stephen R. Weiss, *stephen_weiss@mcgraw-hill.com*
DIRECTOR, FINANCE	Ike Chong, *ike_chong@mcgraw-hill.com*
DIRECTOR, SPECIAL PROJECTS	Charles Pinyan, *cpinyan@mcgraw-hill.com*
REPRINTS	Reprint Management Services, *architecturalrecord@reprintbuyer.com*

EDITORIAL OFFICES: 212/904-2594. Editorial fax: 212/904-4256. E-mail: *rivy@mcgraw-hill.com.* Two Penn Plaza, New York, N.Y. 10121-2298. **WEB SITE:** www.architecturalrecord.com. **SUBSCRIBER SERVICE:** 877/876-8093 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087. E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions. 800/242-3837. E-mail: *members@aia.org.* **INQUIRIES AND SUBMISSIONS:** Letters, Robert Ivy; Practice, Charles Linn; Books, Clifford Pearson; Record Houses and Interiors, Sarah Amelar; Products, Rita Catinella Orrell; Lighting and Interiors, William Weathersby, Jr.; Residential, Jane F. Kolleeny; Web Editorial, Randi Greenberg.

ARCHITECTURAL RECORD: (ISSN 0003-858X) July 2005. Vol. 193, No. 07. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. 10020. Periodicals postage paid at New York, N.Y. RCSC and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 40012501. Return undeliverable Canadian addresses to: DPGM Ltd., 4960-2 Walker Road, Windsor, ON N9A 6J3. Email: P64ords@mcgraw-hill.com. Registered for GST as The McGraw-Hill Companies. GST No. R123075673. ***Postmaster:*** *Please send address changes to* ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates are as follows: U.S. and Possessions $64; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $9.95; for foreign $11. Subscriber Services: 877/876-8093 (U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087. **SUBMISSIONS:** Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage. **SUBSCRIPTION LIST USAGE:** Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520. **OFFICERS OF THE MCGRAW-HILL COMPANIES:** *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Human Resources:* David L. Murphy. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Kathleen A Corbet, *President, Standard & Poors;* Henry Hirschberg, *President, McGraw-Hill Education;* Scott C. Marden, *President, McGraw-Hill Information and Media Services.* **MCGRAW-HILL CONSTRUCTION:** Norbert W. Young, Jr., FAIA, *President, Vice President and CFO:* Louis J. Finocchiaro. **COPYRIGHT AND REPRINTING:** Title ® reg. in U.S. Patent Office. Copyright © 2005 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC, ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 800/360-5549 X 129 or e-mail architecturalrecord@reprintbuyer.com. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information or for any damages resulting there from.

McGraw-Hill CONSTRUCTION ABC MPA The McGraw-Hill Companies

THE AMERICAN INSTITUTE OF ARCHITECTS 2005 BOARD OF DIRECTORS • OFFICERS: Douglas L. Steidl, FAIA, MRAIC, President; Kate Schwennsen, FAIA, First Vice President; Shannon Kraus, AIA, Vice President; Thomas R. Mathison, FAIA, Vice President; RK Stewart, FAIA, Vice President; John C. Senhauser, FAIA, Secretary; James A. Gatsch, FAIA, Treasurer; Ana Guerra, Associate AIA, Associate Representative to the AIA Executive Committee; Saundra Stevens, Hon. AIA, CACE Representative to the AIA Executive Committee; Norman L. Koonce, FAIA, Executive Vice President/CEO. • **REGIONAL DIRECTORS:** Peter J. Arsenault, AIA, NCARB, LEED AP; Douglas E. Ashe, AIA; Michel C. Ashe, AIA; Ronald J. Battaglia, FAIA; William D. Beyer, FAIA; Michael Broshar, AIA; David J. Brotman, FAIA; Randy Byers, AIA; Tommy Neal Cowan, FAIA; Jacob Day; Jeremy Edmunds, Associate AIA, LEED AP; Glenn H. Fellows, AIA; Robert D. Fincham, AIA; Jonathan L. Fischel, AIA; Marion L. Fowlkes, FAIA; Saul Gonzalez; The Hon. Jeremy Harris, Hon. AIA; John J. Hoffmann, FAIA; William F. Holloway, AIA; Clark Llewellyn, AIA; Marvin J. Malecha, FAIA; Clark D. Manus, FAIA; Linda McCracken-Hunt, AIA; Carl F. Meyer, FAIA; George H. Miller, FAIA; Elizabeth E. Mitchell; Hal P. Munger, AIA; Robin L. Murray, AIA, PP; Celeste A. Novak, AIA, LEED AP; Gordon N. Park, CDS, AIA; David R. Proffitt, AIA; Marshall E. Purnell, FAIA; Miguel A. Rodriguez, AIA; Jerry K. Roller, AIA, NCARB; Jeffrey Rosenblum, AIA; Robert I. Selby, FAIA; Norman Strong, FAIA; Leslie J. Thomas, AIA; J. Benjamin Vargas, AIA; Bryce A. Weigand, FAIA. • **AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, Executive Vice President/CEO; James Dinegar, CAE, Chief Operating Officer; Richard J. James, CPA, Chief Financial Officer; Jay A. Stephens, Esq., General Counsel; Helene Combs Dreiling, FAIA, Team Vice President, AIA Community; Ronald A. Faucheux, PhD, Esq., Team Vice President, AIA Government Advocacy; Barbara Sido, CAE, Team Vice President, AIA Knowledge; Elizabeth Stewart, Esq., Team Vice President, AIA Public Advocacy; David Downey, CAE, Assoc. AIA, Managing Director, AIA Communities by Design; Suzanne Harness, AIA, Esq., Managing Director and Counsel, AIA Contract Documents; Richard L. Hayes, Ph.D., RAIC, AIA, CAE, Managing Director, AIA Knowledge Resources; Brenda Henderson, Hon. AIA, Managing Director, AIA Component Relations; Christine M. Klein, Managing Director, AIA Meetings; Carol Madden, Managing Director, AIA Membership Services; Philip D. O'Neal, Managing Director, AIA Technology; C.D. Pangallo, EdD, Managing Director, AIA Continuing Education; Terence J. Poltrack, Managing Director, AIA Communications; Phil Simon, Managing Director, AIA Marketing and Promotion; Laura Viehmeyer, SPHR, CEBS, CAE, Chief Human Resources Officer.

PRINTED IN USA



Other glass is so old school.

Pilkington Pyroshield™ Plus

The NEW wired glass that satisfies the 2003 IBC impact safety requirements

- *Meets CPSC 16CFR1201 (Cat. I)*
- *No scratchable surface film required*
- *Fire ratings from 20 to 90 minutes*
- *Easy to cut*
- *Listed with U.L.*
- *Permanently labeled*

Contact us for more details!

TGP
Technical Glass Products®
ONE SOURCE. MANY SOLUTIONS.

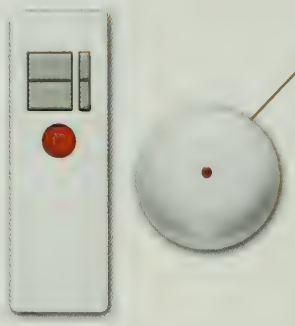
fireglass.com
1-888-397-FIRE (3473)

© 2005 Technical Glass Products. Pyroshield is a trademark of Pilkington. Fireglass, Technical Glass Products and One Source. Many Solutions. are trademarks of Technical Glass Products.

CIRCLE 4 ON READER SERVICE CARD OR GO

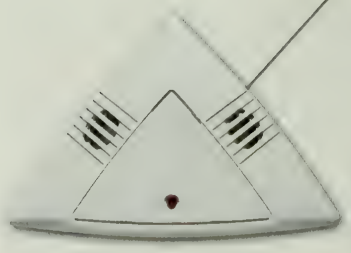
Light is everything.

Light affects people.
When the light is right, students learn more, employees are more productive, there are fewer health complaints and occupant comfort is increased.



IR hand-held remotes and receivers for personal control

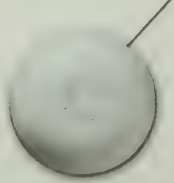
Light is expensive.
Despite the fact that most lighting is energy-efficient, fluorescent lighting is still the primary source of energy consumption in most buildings.



Occupant sensors for energy management

Scalable from 1 to 32,000 fixtures

Light is daylight and electric light.
Both sources should be in harmony to keep people comfortable and productive, address building energy usage, and promote green design.



Photocells for daylight harvesting

Introducing EcoSystem™

Dimming ballasts for
fluorescent lighting

LIGHTFAIR INTERNATIONAL

2005 winner best of category
Award for Ballasts and Transformers



EcoSystem™
Light control that is simple and cost-effective.

Using the same basic components, build a system for a single lighting fixture in a single room, or for thousands of fixtures throughout an entire building.

Sensors and wallstations connect directly to any ballast — without interfaces or powerpacks — and share information with other ballasts throughout the system.

Over the life of the building, change or repurpose the space easily without costly rewiring.

Experience EcoSystem for yourself.
Call Lutron at **1.877.258.8766 ext 244**, or visit **www.lutron.com/ecosystem**.

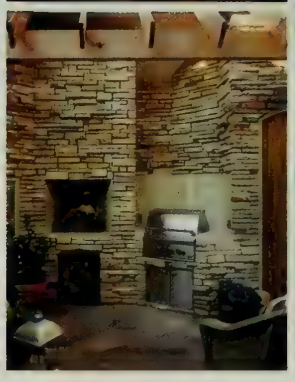
LUTRON
Lutron controls your light...

CIRCLE 5 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

...inc. All rights reserved. Patented. ... registered trademark of ... Corning ... Colored Stone" is a registered trademark of ...









YOU HAVEN'T BEEN ALLOWED THIS MUCH CREATIVI



Envision the possibilities with StoneCAD® software StoneCAD® software has everything you need to select, visualize, detail and specify Cultured Stone® products. Detailed installation drawings, full-color tileable textures and hatch patterns needed to render drawings can be viewed, printed, imported and exported into most CAD, 2-D and 3-D programs. There's even a photo gallery tour with hundreds of Cultured Stone® product applications, catalogued by project type for easy reference.

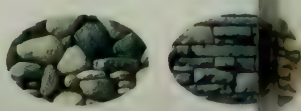
The Cultured Stone® brand offers a wider variety of shapes, textures, sizes and colors than any other brand of manufactured stone veneer.

In other words, no one else gives you as many possibilities. So when you design with Cultured Stone® veneer you're only limited by your imagination. And wherever you use it, the opportuniti... adding a unique signature touch and being creative are endles...

All Cultured Stone® products are available nationally, and for t... six years the Cultured Stone® brand has ranked #1 in builder...









NCE YOUR WORK HUNG ON THE FRIDGE.



ore than two to one.* So go ahead, let your imagination run wild reate an architectural masterpiece with Cultured Stone® veneer. o find out more about Cultured Stone® products, visit us at culturedstone.com or call 1-800-255-1727.

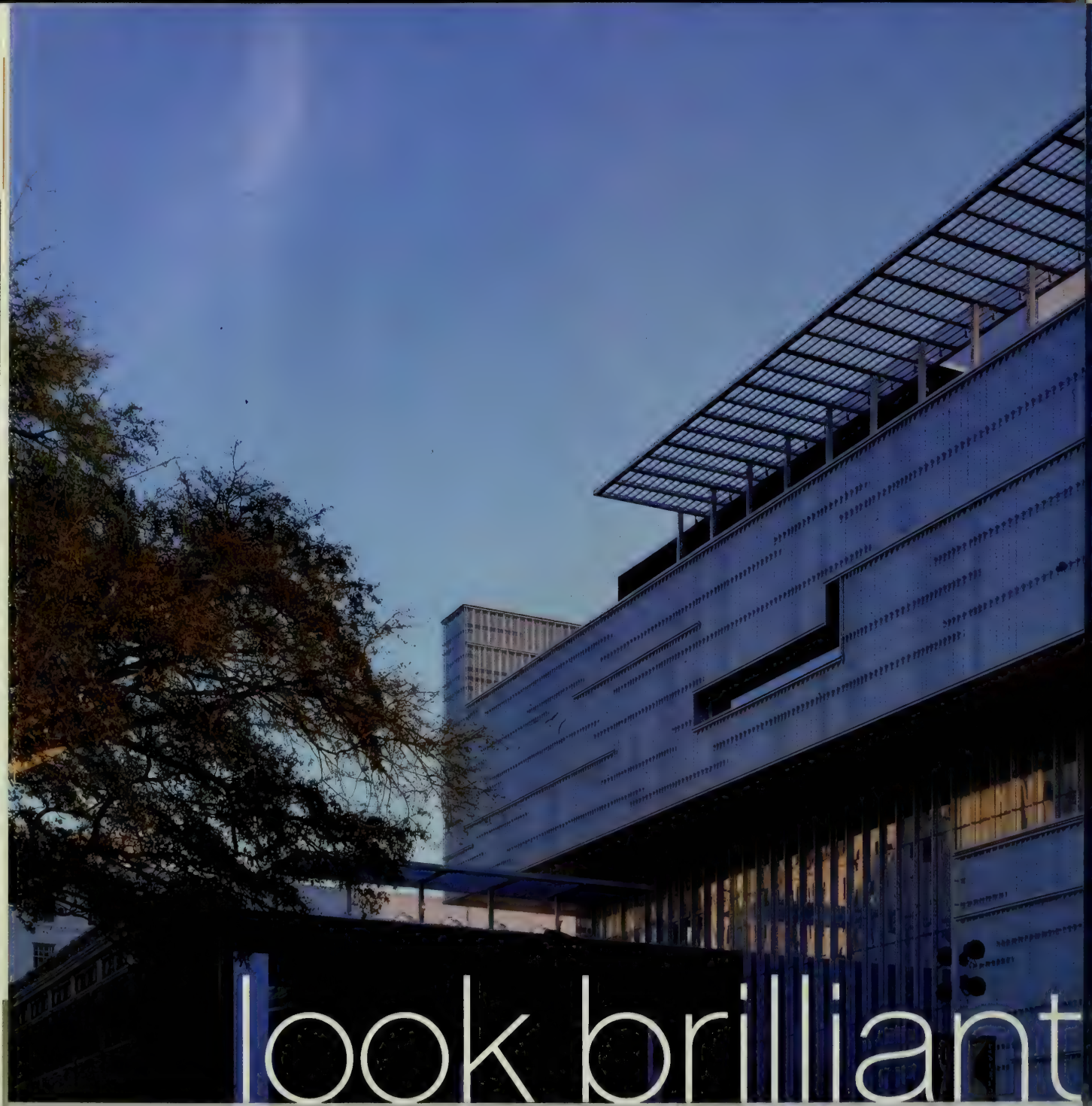


ACOUSTICS •
INSULATION •
ROOFING •
MANUFACTURED STONE VENEER •
SIDING •



OWENS CORNING®
INNOVATIONS FOR LIVING.™

CIRCLE 6 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



look brilliant

Shaw Center for the Arts
Baton Rouge, LA

40,000 sq. ft. Rainscreen
of LINIT channel glass

ARCHITECT Schwartz/Silver Architects
GLAZIER BHN, Memphis, TN

Bendheim Wall Systems and Lamberts bring you LINIT channel glass, a brilliant solution for creating breathtaking facades that are impossible to achieve with conventional glass wall applications..

For three generations, Bendheim and Glasfabrik Lamberts, the largest independently-owned glass factory in Europe, have worked as a team to deliver outstanding quality and service to North American architects, builders and glaziers.



her LINIT channel glass projects include:

itute of Contemporary Arts, Boston, MA ARCHITECT Diller, Scofidio + Renfro
ée Français, New York, NY ARCHITECT Polshek Partners Architects
neapolis Library, Minneapolis, MN
RCHITECT Cesar Pelli & Associates–Architects; Architectural Alliance
son-Atkins Museum, Kansas City, MO ARCHITECT Steven Holl Architects
ss Embassy, Washington, DC ARCHITECT Steven Holl Architects & Justin Russli Architects
Winter Garden, New York, NY ARCHITECT Cesar Pelli & Associates–Architects
stwood Library, Los Angeles, CA ARCHITECT Stephen Ehrlich Architects

BENDHEIM
WALL SYSTEMS, INC.

Visit us on the Web at
www.bendheimwall.com
or call 800 221-7379

CIRCLE 7 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

It has made cranky old cabinetmakers smile. Flooring installers have brought their kids in to show off their work. And architects have been made to look even more like geniuses.







It's plantation-grown Lyptus®. Even though it grows many times faster than other hardwoods, Lyptus® is stronger than hard maple. It's also extremely versatile, as it is available in sawn lumber, plywood, veneer and flooring. It machines beautifully and welcomes a variety of finishes. Lyptus® products are grown in managed forests so you can be assured of consistent quality and supply—and the price is pleasantly predictable.

To find out more or to schedule a presentation, call 877-235-6873.

Lyptus®

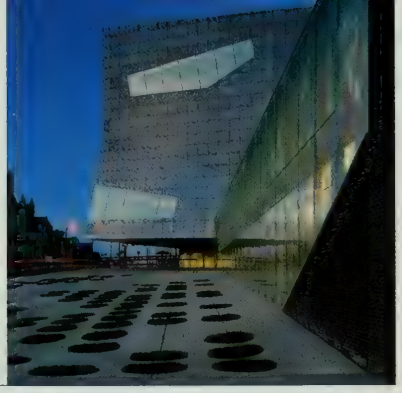
Distributed by Weyerhaeuser
weyerhaeuser.com/lyptus

©2005 Weyerhaeuser. Lyptus is a registered trademark of Aracruz Produtos de Madeira S.A.

CIRCLE 8 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL RECORD

07.2005



On the Cover: *Peter Eisenman's Memorial to the Murdered Jews of Europe . Photograph by Roland Halbe*
Right: *Herzog & de Meuron's Walker Art Center. Photograph by Paul Warchol*

News

25 Report from Las Vegas: AIA Convention 2005

28 Norten designing Guggenheim in Mexico

Departments

17 Editorial: Plus Ça Change

21 Letters*

47 Archrecord2: For the emerging architect *by Randi Greenberg**

51 Critique: Architecture, memory, and place *by Robert Campbell, FAIA*

57 Books: Summer Reading

63 Exhibitions: 2005 World Exposition *by Fred A. Bernstein*

67 Correspondent's File: Miami *by Sara Hart*

71 Snapshot: Deer Moat Pedestrian Tunnel *by Beth Broome*

257 Dates & Events*

279 Record House of the Month *by Suzanne Stephens**

Features

76 Big Firms Growing Bigger *by James S. Russell, AIA*
What's to learn from the country's largest architect-led firms.

Projects

87 Introduction *by Robert Ivy**

88 Walker Art Center, *Minneapolis* *by Sarah Amelar**
Herzog & de Meuron
A lively expansion animates a museum's reserved existing structure.

100 Casa da Musica, *Portugal* *by David Cohn**
Office for Metropolitan Architecture
Dramatically sculptural, a concert hall makes its grand entrance.

112 Yad Vashem Holocaust Museum, *Jerusalem* *by Andrea O. Dean**
Moshe Safdie and Associates Architects
Tunneled through a hilltop, a history museum crowns a memorial.

120 Memorial to the Murdered Jews of Europe, *Germany*
*by Suzanne Stephens**
Eisenman Architects
Journeying across a monumental landscape of light and shadow.

Building Types Study 847

131 Introduction: Multifamily Housing *by Jane F. Kolleeny*

132 Loloma 5, *Arizona* *by Clifford A. Pearson**
Will Bruder Architects

136 Palm Springs Modern Homes, *California* *by Joseph Giovannini**
DesignARC

142 Orange Grove, *California* *by Allison Milionis**
Pugh + Scarpa

146 The Titan, *California* *by Ann Jarmusch**
Jonathan Segal Architect

For 9 additional Multifamily projects, go to Building Types Study at **architecturalrecord.com**.

Architectural Technology

153 The Pick of the Sustainable Crop
*by Nancy B. Solomon, AIA**
AIA's top picks reveal the many forms of green architecture.

163 Tech Briefs*

Residential

199 Introduction *by Jane F. Kolleeny*

200 Burton House *by Ann Jarmusch*
LUCE et Studio Architects

206 Ecoms House *by Naomi Pollock*
Riken Yamamoto & Field Shop

210 James-Robertson House *by Christopher Moore*
Dawson Brown Architecture

214 Villa Lucy *by John Pastier*
WPa

221 Kitchen & Bath Portfolio *by Rita Catinella Orrell*

231 Kitchen & Bath Show Review *by Linda C. Lentz*

236 AIA PIA Awards

Products

241 Sustainable Choices

245 Milan Furniture Fair Review

254 Product Literature

264 Reader Service*

264 AIA/CES Self-Report Form*

AR is the proud recipient of a
National Magazine Award for General Excellence

* You can find these stories at **www.architecturalrecord.com**, including expanded coverage of Projects, Building Types Studies, and Web-only special features.

This month in Continuing Education

In This Issue:

Pages 169 – 173 **Silence is Golden: Controlling Sound in Non-Residential Structures**
Sponsored by Marvin Windows and Doors

LEARNING OBJECTIVES:
- Recognize situations that require sound control in non-residential structures
- Understand sound transmission as it relates to occupied buildings
- Identify the appropriate sound rating systems for glass and framing materials used in windows and doors
- List and compare the primary advantages and disadvantages of window and door options



Pages 175 – 179 **From Quarry to Residential Countertop**
Sponsored by Marble Institute of America

LEARNING OBJECTIVES:
- Know basic sequencing of processes for natural stone to go from quarry to countertop
- Learn elements that influence selection for interior applications and factors that affect cost
- Understand factors to consider regarding sealing natural stone



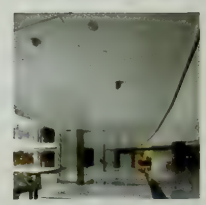
Pages 181 – 185 **Green Product Evaluation Necessitates Making Trade-Offs**
Sponsored by USG

LEARNING OBJECTIVES:
- Better judge the sustainability of materials
- Specify "green"
- Understand and apply the concept of "embodied energy"



Pages 187 – 197 **Specifying Ceilings**
Multi-sponsored

LEARNING OBJECTIVES:
- Recognize the trends in ceiling design
- Know the primary materials being used to satisfy these trends
- Understand the impact of ceilings on building performance



This month at archrecord.construction.com



Memorial to the Murdered Jews of Europe, Berlin
Courtesy Sebastian Mittendorfer

Projects

This month our project portfolio includes rich architectural works by Rem Koolhaas, Peter Eisenman, Moshe Safdie, and Herzog and de Meuron. Our Web site features a timeline that tells the story of Eisenman's Holocaust Memorial in words and photos.

Daily Headlines

Get the latest scoop from the world of architecture.



Ecoms House, Saga, Japan
Photography © Shinkenchiku-Sha

Residential

This quarter's residential section explores homes that use metal as a predominant material. As always, we also feature our Web-exclusive House of the Month.

Sponsored by
Thermador
An American Icon



Meadowcroft, Cambridge, England,
Courtesy Proctor and Matthews Architects

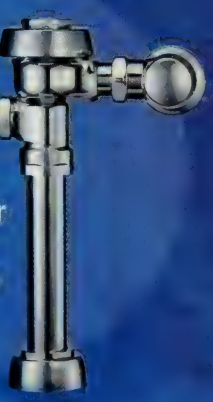
Building Types Study

Consumers are demanding new, modern homes close to the workplace. That's driving the market away from single-family sprawl toward high-density living. Discover nine multifamily housing projects not seen in the pages of our magazine.

Sponsored by
Follansbee
PPG Ideascapes
Glass • Coatings • Paint

Water is Precious

NEW



Dual-Flush Flushometer
Lift up for liquid waste, and down for solid waste.

Water is the most valuable resource in our world.

Water Conservation is fast becoming a global challenge.

How do we accept the challenge?

Since 1906, Sloan has provided reliable, cost-effective solutions to delivering water. We believe you share our commitment to water conservation.

Sloan's new Dual-Flush Flushometer – the first commercial Flushometer to reduce water volume by 30%.

- Lifting handle up initiates reduced flush (1.1 gpf), eliminating liquid and paper waste, saving a 1/2-gallon of water!
- Pushing handle down initiates full flush (1.6 gpf), eliminating solid waste and paper.
- Antimicrobial coating on handle protects against germs.
- Distinctive green handle signifies water-conserving fixture

Sloan's **Water Conservation Division** and LEED®-applicable products can help you achieve your sustainability objectives.

Let Sloan's **Water Conservation Division** be your partner. For more information, contact:



Waterfree urinals



Water-saving electronic faucets



Water-saving pressure-assist water closets



Water-saving showerheads



Water-saving manual and electronic Flushometers

SLOAN.

Call 800-9-VALVE-9 (800-982-5839) ext. 5609
www.sloanvalve.com

In China:
Sloan Valve Water Technologies (Suzhou) Co. Ltd. · Suzhou New District, China · www.sloan.com.cn

CIRCLE 9 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



ALUCOBOND®

The original aluminum composite material.

Make your statement.

Shaping The future

Alcan Composites USA Inc. • 800-626-3365 • www.alucobond.com

ALCAN COMPOSITES

CIRCLE 10 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Plus Ça Change

Editorial

By Robert Ivy, FAIA

For more than three years they have come. Day by day, the faithful gather at the wall, drawn to the place where the unthinkable happened. After the obligatory photograph, they stare down, past the PATH station discharging its human cargo, into the gaping void, wondering what will become of Ground Zero. Little wonder. Even vigilant city dwellers and professionals have lost focus on the development spiral.

For a few short months, particularly in the days surrounding the selection of a master planner, we had hoped for more. Daniel Libeskind mounted the stage with élan, flourishing authoritative rhetoric in words and images, pointing a way out of the 75-foot-deep mire. He had a vision (we could see it; it was near-tactile in the imagery) that rested on bedrock at one extreme and spiraled toward new heights for Lower Manhattan. That plan was founded on architecture.

Libeskind, however, lacked the one ingredient New York thrives on. Power flows like water in this great city between the poles of money and politics and, particularly here, real estate, while architects stand at its margins. You've read the books before. Today, the anointed architect's ideas have dissipated as the powers-that-be squeezed the 16 acres into submission, resulting in a desultory mix that contains less bouquet and more blend. Witness business as usual for New York, New York.

All is not lost. Although the outcome remains unresolved, we should see interesting individual buildings, some by world-class designers at the height of their abilities. No one quibbles that Santiago Calatrava seems on the way toward a poetic major work in the transit hub. Nor that Snøhetta has unveiled a provocative structure—even though already criticized in The New York Times *for being politically compromised—for a cultural center that defies gravity. The whole world loves Frank Gehry, and even the prospect of his as-yet-undefined performance center.*

Yet trouble lurks at the cornerstone. SOM is scheduled to show, as this issue goes to press, its revisions to the Freedom Tower, suggesting adjustments to its original torqued skyscraper. We expect the redesigned plan to address security concerns expressed by the New York Police Department, including further setbacks from the street, less eccentricity in its form, and the absence of an open fretwork of superstructure and cabling at its crown, as well as a hardened base. This tower, freighted with the emotional baggage surrounding the whole site, has loomed tall and troubled, particularly since the forced relationship between the principals attracted widespread attention. We can hope for a simplified, integrated scheme today.

The memorial, though backed by a blue-ribbon panel, nevertheless appears to have struggled to find private funding. Modified to include a parklike setting by landscape architect Peter Walker, Michael Arad's winning scheme seems compromised, its size diminished and its circulation reduced to two descending ramps. Long ago, Libeskind's exposed slurry wall, the entire site's one flash of brilliance, had been relegated to subterranean status.

Examining the larger current site plan offers no comfort. Instead, the former World Trade Center has been populated with individual components, flung across the shadow of Libeskind's original master plan, with no hint of complexity or urban dialogue at the street level. By contrast, Peterson/Littenberg's densely planned, carefully modulated urban dreamscape à la Rockefeller Center (minus the architecture) seems like an urban idyll, compared to today's prospects.

Before we resort to hand-wringing, an admission is in order: The public expected architecture to solve the unsolvable on the World

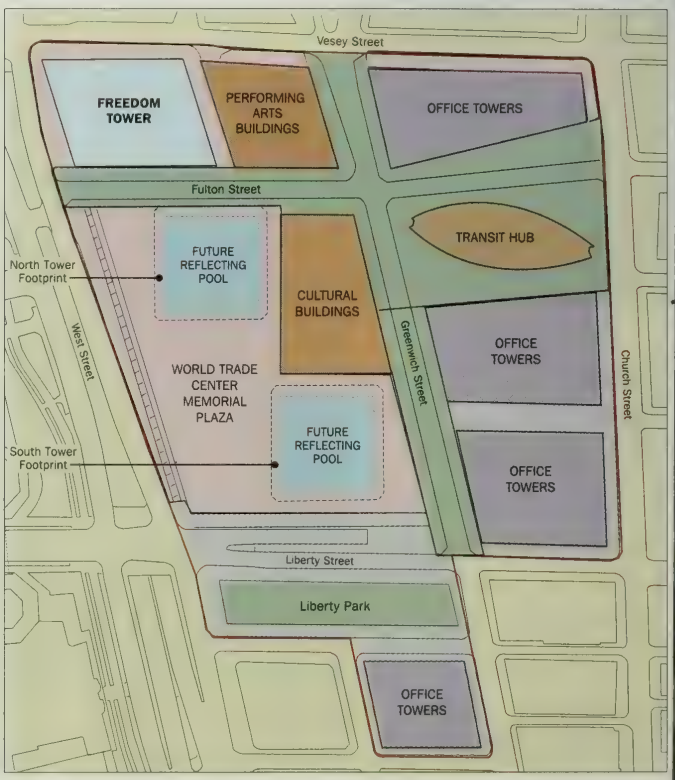
Trade Center site. Design offered an answer to the wrenching pain we all felt in the aftermath of destruction and loss on September 11, 2001. Building back meant reclaiming our sense of self, and ordinary men and women looked to architecture for the blueprint. Design and architecture assumed importance in popular discourse; coverage in the media broadened to include changes and advancements in all kinds of design, a movement that continues today.

Furthermore, the site remains largely unbuilt. While the governor has appointed a trusted aide and ally to push construction forward, total funds have not yet been raised for the institutions involved. Most tellingly, the first major office building completed at Ground Zero remains largely unleased. 7 World Trade Center, developer Larry Silverstein's first significant office tower, which faces the World Trade Center site, has no major tenants other than the developer. With nearby office space lying unleased, the Freedom Tower probably faces a similar fate.

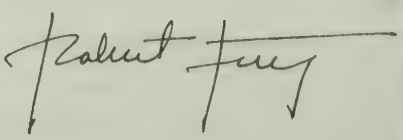
In all the hype, one truism contains real truth: A complex project demands a great client. Instead, we have faced compromise at every turn and find ourselves stuck in the subjunctive: Had the governor seized the moment, spoken with authority, claimed the ground, acted with Machiavellian virtu, he might have cut through the competing noise of the claimants and led us beyond mediocrity. If the developer, Larry Silverstein, possessed a more enlightened civic sensibility. If the city could have swapped property with the Port Authority of New York and New Jersey, and if the Port Authority could have bought out Silverstein … If only we had a czar.

But who really wants another Robert Moses? The truth is that we may not need the contemporary version of Rockefeller Center or other mono-visions; we may benefit from the accretions of commerce or residential development that may spring up uninvited. Our wide-open times, replete with invention and competing ideas, suggest other analogies for urban development more akin to atomistic, even metabolic ones (the city or the site as organism?). In such an urban scheme, the plan would serve as a framework for organic civic growth rather than as a definitive, controlling document.

At Ground Zero, the former World Trade Center site, the controlling metaphor today may be vision, but if so, the vision has blurred. Our task as architects and planners is to refocus our attention on the site, individually and collectively. Tomorrow, New Yorkers awake to another day. Plus c'est la même chose? More of the same? Certainly not. In architecture, as in all construction, until the concrete has been poured, it is never too late to change the documents.



Libeskind's master plan includes office towers, cultural buildings, the memorial, and the Freedom Tower. Today, the site remains largely unbuilt.



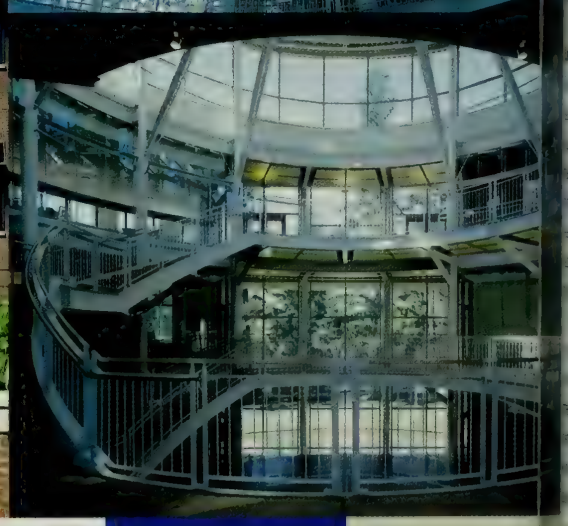

5 MIN.
3 MIN.
1 MIN.
0 MIN.
2 MIN.
1 MIN.
3 MIN.
1 MIN.
FIND YOUR "AHHHH."
1-555-4TRAVEL
SAMSUNG
Stop a moving target.
With the world's first 46-inch LCD.
Introducing the industry-leading Samsung 460P LCD.
Double takes. Breathless stares. Drool. Some of the known side effects to Samsung's 460P, the largest and fastest LCD available. With stunning contrast and 8-millisecond response, it delivers breathtaking, hi-def imagery that is sure to captivate. And if that doesn't stop you in your tracks, our 3-year, on-site service warranty will. For all the details, visit www.samsung.com/proav
©2005 Samsung Electronics America, Inc. Samsung is a registered trademark of Samsung Electronics Co., Ltd. All product and brand names are trademarks or registered trademarks of their respective companies. Screen images simulated.
SAMSUNG
CIRCLE 11 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Going Green With Class

Business school sports sustainable design







Lillis Business Complex at the University of Oregon, Eugene, SRG Partnership

Before the first line was drawn, sustainability was a vital part of the plan for the Lillis Business Complex at the University of Oregon. The goal was to design a building that demonstrated environmental stewardship.

No problem. All it took was one phone call to The Vistawall Group for its green team of products, including curtain wall featuring scores of photovoltaic panels, storefront, doors, and windows.

The Vistawall Group is the single source supplier for a Green planet.

The Vistawall Group

800-869-4567 f (972) 551-6264

For specifications and detail information, visit: vistawall.com

CIRCLE 12 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

The Vistawall Group
a BlueScope Steel Company

VISTAWALL ARCHITECTURAL PRODUCTS

MODULINE WINDOW SYSTEMS

NATURALITE SKYLIGHT SYSTEMS

SKYWALL TRANSLUCENT SYSTEMS

Curtain Wall

Storefront

Entrance System

Operable Window

Ventilation System

Slope Systems

Skylights

Translucent Panel

Letters

Raise the bar

To make a drawing in public takes a great act of confidence. To draw (and paint) in front of 5,000 architects takes a great act of brilliance. As one of those architects who witnessed the lecture by Gold Medalist Santiago Calatrava [May 2005, page 162] at the AIA convention in Las Vegas, I was brought to tears by his brilliance. Perhaps it is time for the AIA to raise the bar—gold may not be good enough.

Joseph Lengeling, AIA
Magnusson Architecture and Planning
New York City

Las Vegas lessons

Thank you for your insightful coverage of Las Vegas in your May issue [pages 186 and 194]. At least the magazine tried to address something substantive in relation to this year's convention venue. It's too bad the convention itself failed to do the same.

Other than "A Conversation with Steve Wynn and Tony Marnell," only two of the many seminars offered made any mention of the host city. Nor did the theme sessions speak to any of the pressing social, architectural, and urban issues that your articles so astutely identified.

Think about it: The convention assembled 24,000 participants from the world's largest community of design professionals for three days in one of the most surrealistic environments imaginable—and asked them, in effect, to completely ignore their surroundings. Apparently, the "Power of architecture" to "Imagine, Create, and Transform" is to be applied only to places and situations that are less messy and disturbing than the ones staring us in the face on the Strip.

Patrick Winters, AIA
Via e-mail

Boycotting the big house

I am writing in response to the Record News item, "Prison design boycott aims to slow growth of correctional facilities" [June 2005, page 30]. I find the Architects/Designers/Planners for Social Responsibility's position intriguing—that by boycotting prisons, we'll solve and/or eliminate the problem. I think we should apply this logic to other institutions of society that display "inherent racial and social inequalities."

For example, I find hospitals particularly distasteful—they routinely reject patients with inadequate insurance, charge astronomical sums for treatment and medications, locate in the wealthiest areas, and periodically kill people by negligence. I think we should boycott hospitals. And don't get me started on accounting firms and police departments.

Prison units are necessary receptacles for people who break the law. Congress makes the law, police enforce the law, the courts dispense penalties, and the prisons incarcerate the offenders. If you believe the system is faulty, perhaps you should start with Congress and work your way down. Or, we could empty out San Quentin, and you could tell me how that works out for you.

Roger A. Moore, AIA, NCARB
Architect, Facilities Division,
Texas Department of Criminal Justice
Huntsville, Tex.

Johnson's parting gift

Your three articles on Philip Johnson in the May issue were right on target [page 176]. Of the three, Michael Sorkin's was the most entertaining and provocative. His subtle anger is a good antidote to undeserved and uncritical praise of Johnson's work. At the same time, in defense of Johnson, I do not think we architects can be held responsible for society's ills, nor do I think we can do much about the trajectory of civilization—currently, in my opinion, on a downward path. All of us are in the service of clients, some of whom are enlightened, but most not. And although I am sure we all strive to give the client more than they are able to articulate, we are increasingly defeated by the budget and time restraints imposed by a profit-oriented, bottom-line, business-dominated culture.

Sorkin is certainly right in suggesting that Johnson was not a visionary architect, indeed that his designs were derivative at best, Disneyesque at worst. Sorkin is also right in linking Johnson's Ayn Rand brand of fascism to his work. Although not as in-your-face fascistic as Albert Speer's architecture, it is a celebration of capitalism and its unhumanistic insensitivity to both site and human context. To paraphrase Vitruvius, theory is the foundation of design. It is inconceivable that theory can exist independent of personal, political, and even religious beliefs. I leave it to scholars to uncover the connections between Johnson's fascistic and racist proclivities and his architecture, but I am convinced they exist.

We cannot predict how the future will judge Johnson and his work, but if his death serves as a stimulus for a lively and productive discussion of the ideas presented in your three articles, his life has already made a valuable contribution to our profession.

J.D. Coleman, Arch. Ph.D.
University of Cincinnati
Cincinnati

Getting away from it all

Fifty years ago, ARCHITECTURAL RECORD published Ulrich Franzen's home in suburban New York. At that time, in the charming small town of Rye you could still find a reasonably priced 2-acre lot with good nearby schools. You can even imagine a young 35-year-old Franzen catching the train to the city, joining his newly formed office, and then returning home to his family and his newly constructed house, "a house of serene beauty, lyrical, playful, and self-assured," as described by Stanley Abercrombie.

Times have indeed changed, and your magazine's response to the original challenge of documenting how "real-life people" live seems to, as well. Record Houses 2005 offers us 10 interesting examples of houses embracing, as a celebration, a new Modernism. All enjoy living with nature as planned, and the majority allow their owners to get away from it all—as programmed. Unfortunately, these programs have little in common with what the majority of our residential designers are designing, and possibly to what the majority of your readers are looking to read about. Yes, powerful images can free the mind, but isn't it a little bit like a "concept car": an assemblage of good, responsible ideas, but in a package not necessarily reflecting the majority of customers' needs or interests?

Walter M. Daly
Baltimore

Corrections

The photograph of Philip Johnson's Penzoil Place in the May issue [page 180] should have been credited to Wayne Andrews/Esto. The credits for the coverage of the Shaw Center for the Arts [June 2005, page 86] were incomplete. The channel-glass curtain wall should have been credited to Lamberts LINIT channel glass; the supplier was Bendheim Wall Systems.

Write to rivy@mcgraw-hill.com



© 2005 Weather Shield Mfg., Inc

Freedom of **EXPRESSION** comes in many shapes and sizes.

Proudly offered: Custom shapes and sizes from Weather Shield give you the freedom to create practically any window or door. Simulated Divided Lite (SDL) stars shown here in maple and True Divided Lite (TDL) stripes in cherry and mahogany from Weather Shield's Custom Wood Interiors Collection®. Blue, red, dark red and opaque white glass from Vanceva™ by Solutia®. For complete custom capabilities call **1-800-477-6808** or visit **weathershield.com/AR**



Demand better. Compromise nothing. **Want More™**

Weather Shield® Premium Windows and Doors

CIRCLE 13 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Discover



Pioneer. Explore new directions for your project with legendary wood veneers or exotic laminates. Blaze a trail with our growing product line, including our new stile and rail doors. And navigate your way to beauty by specifying our UV-cured factory finish system. VT Architectural Wood Doors. They're a move in the right direction.

Call our new Architectural Hotline at 1-800-827-1615 ext. 345 or visit www.vtindustries.com/doors.

VT INDUSTRIES Architectural Wood Doors

CIRCLE 14 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Record News

Highlights

p.26 **New York stadium dies, another is born**
p.28 **Norten designing Guggenheim in Mexico**
p.30 **Wal-Mart heirs sponsoring new museum**
p.37 **D.C. shelves two major projects**

Learning from Las Vegas: AIA convention heads to the Strip

The hot sun and bright lights were at times bewildering, but about 24,500 architects made their way to the Mandalay Bay Hotel in Las Vegas in late May for a successful American Institute of Architects convention.



A view of the Vegas Strip.

The number of attendees was 10 percent more than the last convention in Chicago, and a new record for the event, now in its 137th year. The AIA Expo, meanwhile, featured 860 exhibiting companies, also a record, although only slightly above last year's number, due to an effort to ensure that the event wasn't too overwhelming. In an atmosphere like Las Vegas, where neon signs blaze, life-size re-creations of world monuments loom, and slot-machine sirens blare, this was a tall order. Especially with unseasonable temperatures reaching up to 105 degrees. Nonetheless, the rapidly growing city confidently took the spotlight, as architects explored the Strip, including the sleek new $2.7 billion Wynn Casino, and points beyond, with tours extending as far as the Grand Canyon and Hoover Dam.

The convention, from May 18 to May 21, featured speakers such as 2005 AIA Gold Medalist Santiago Calatrava, FAIA, recent Pritzker Prize winner Thom Mayne, FAIA, Las Vegas's Mayor Oscar Goodman, and the Wynn's developer Steve Wynn, who hailed the importance of taking design risks. Over 50 educational seminars included a conversation with World Trade Center Memorial designer Michael Arad, and touched on topics like interoperability, design-build, and risk management.

Delegates elected Gensler principal RK Stewart, FAIA, as 2007 AIA president, and passed resolutions targeting increased awareness of sustainability and the declining number of newly registered architects. The convention will meet next year in Los Angeles. *Sam Lubell*

World Trade Center cultural building designed to float and disappear

New York State leaders and the Lower Manhattan Development Corporation (LMDC) unveiled a schematic design for the first of two cultural buildings at the World Trade Center site on May 19. The building, designed by Norwegian firm Snøhetta, will house New York's Drawing Center and a new museum called the International Freedom Center. Frank Gehry is designing a performing arts center that would be located across the street to the north.

The Snøhetta building, which will sit on the northeast corner of the Trade Center Memorial's plaza, has been designed to minimize interference with the memorial. In contrast to the planned 1,776-foot Freedom Tower, the cultural center (whose square footage is not yet determined) would be a low, horizontal building, with clear sight lines from Greenwich Street, to its east, to the memorial on the west. Its ethereal surface, whose primary materials were not disclosed, will be covered with glass prisms.

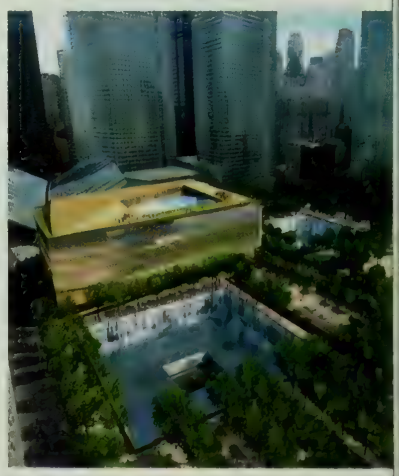
Snøhetta principal Kjetil Thorsen explained the "tabletop design" for the structure, developed with Buro Happold engineers' New York office, whereby the bulk of the building would be hung from a supporting structure at its roof. That structure, in turn, would be supported at its corners. A processional ramp would lead visitors up from ground level to the exhibition and auditorium spaces above. Thorsen's Snøhetta partner, Craig Dykers, said that the architects worked with the Freedom Center and Drawing Center in biweekly workshops over a 90-day period.

The Drawing Center is the only nonprofit organization in the country that focuses on the medium of drawing. The International Freedom Center will tell "freedom's story," according to its mission statement, including "a multimedia collage of some of freedom's most inspiring moments, as well as galleries and temporary exhibits."

New York's Mayor Michael Bloomberg attempted to preempt criticism from the families of September 11 victims by complimenting "a design that integrates the memorial, and is respectful of the buildings around it." But some 9/11 family members didn't accept such reassurances.

Anthony Gardner, chairman of the World Trade Center United Family Group, thinks the Freedom Center's program is too close to that of the memorial's 9/11 museum, and will upstage the memorial. "The rhetoric says that the memorial is the centerpiece, but the reality is it's an afterthought. We're opposed to any plans to locate a non-memorial-related building within the 4-acre memorial quadrant." Gardner feels that if Snøhetta's building were a September 11 museum, "that's a different story, but our center is relegated to being underground. I feel it's an attempt to sanitize the site, to make it more attractive for the office buildings."

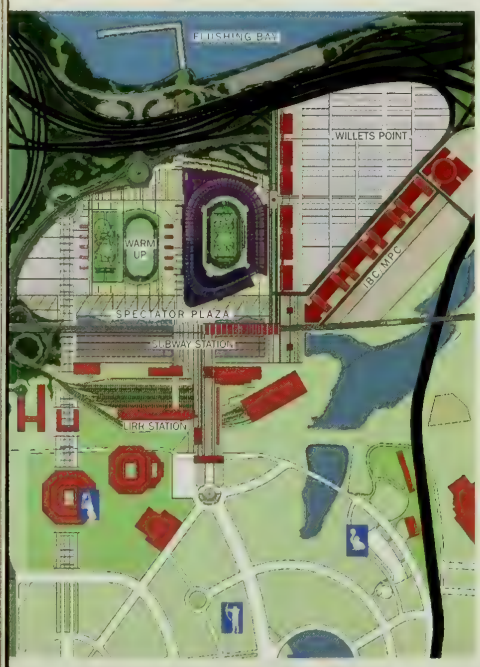
New York's Governor George Pataki, who has been under fire for delays at the World Trade Center site, announced a timeline for the cultural center and for other buildings at the site. He says that new plans for the Freedom Tower, which is being redesigned to address safety concerns, would be presented at the end of June. This summer, construction will begin on the Santiago Calatrava–designed PATH terminal. Crews will break ground to build the memorial plaza itself in 2006, and the cultural center will break ground in 2007. No budget has been announced for the cultural center. *Kevin Lerner*



Snøhetta's cultural center.

Olympic switch: New York rejects Manhattan stadium, proposes another in Queens

The highly contentious New York Sports and Convention Center, proposed for the Far West Side neighborhood of Manhattan, was defeated on June 7 as New York State Assembly Speaker Sheldon Silver and Senate Majority Leader Joseph L. Bruno refused to approve the plan. The vote ended New York Mayor Michael Bloomberg's multi-year quest to secure a new stadium, not only for the New York Jets, but possibly for the 2012 Olympic Games. The city's Olympic bid, however, was given new hope a few days later when Bloomberg announced a new stadium plan in Queens.



The Mets' new stadium will be reconfigured (above top) if New York takes the 2012 games.

The $2.2 billion, 75,000-seat West Side stadium, which was being designed for the Jets by New York–based Kohn Pedersen Fox (KPF), had recently been replanned to better fit the scale and character of the low-rise industrial neighborhood, including an almost 40 percent reduction in height, and the addition of a semitransparent glass facade. But such efforts came to no avail.

At a press conference on June 7, Silver, who held the deciding vote on the state's Public Authorities Control Board, pointed to several pressing city issues as reasons for not supporting the plan. The most important, perhaps, was his position that Far West Side development would have siphoned financial support from Lower Manhattan, which is within Silver's legislative district.

About $1.6 billion of the tab would have been paid for by the Jets, including a $250 million payment to the Metropolitan Transportation Authority (MTA) for the West Side railyard site over which the stadium was to have been built. The remaining $600 million would have been split by the city and state as a public subsidy. "Considering the challenges already facing the city and the state of New York, this plan, at best, is premature," said Silver.

Predictably, stadium supporters such as the Jets, Bloomberg, and Governor George Pataki were outraged. The Jets pinned much of the blame on the Cablevision Corporation, which owns nearby Madison Square Garden, which would have competed with the stadium, and had bid against the Jets for the MTA property. Bloomberg also warned that the stadium's defeat might not only cost the city the Olympics, thousands of jobs, and significant tax revenue, but might discourage builders from pursuing other projects in the city. "One of the great dangers is that developers are going to get disheartened and say, 'I can't build anything in New York City because the politics always get in the way,' " he told reporters on June 8. Bloomberg is not alone in bemoaning the wariness of the local government to fund large-scale projects, although many support its ability to veto developers' plans.



The stadium's size and design had been radically changed a few months ago.

The stadium had been one of the most controversial building projects in recent city history, as many felt it would siphon money from needed projects, ruin the character and scale of the neighborhood, break up connections with the Hudson River, and bring unmanageable traffic and crowds into the area on game days. Supporters felt the project would not only be a boon to sports fans, but would help catalyze the Far West Side, or Hudson Yards District, which is a 40-square-block area enclosed by 42nd and 30th Streets and 8th and 11th Avenues in Manhattan. The area, which has long lain dormant, was recently rezoned to allow significant amounts of commercial and residential development.

For KPF, which would not comment, the project's failure means the loss of several years of work. Meanwhile, as the Jets decide whether to pursue the stadium with private funds (MTA chairman Peter Kalikow said on June 9 that if the team remains interested, the agency would follow through on the deal), other area developers are turning their eyes on the railyards site, and on the rest of the area.

A second chance in Queens

While the city's chances to lure the Olympic games looked bleak after the West Side stadium defeat, they improved on June 13 as the city and the New York Mets announced a plan to build a new stadium for the Mets in Flushing, Queens, which could be converted into an Olympic-size arena should New York win the games.

The stadium, to open in 2009, would replace Shea Stadium and hold 45,000 fans for baseball. It could be converted into an 80,000-seat stadium for the Olympics after the 2011 baseball season. "It wasn't our first choice, but it's an awful good alternative," the mayor said. "New Yorkers aren't quitters. We don't just walk away from our future."

Mets principal owner Fred Wilpon told mlb.com, the official Web site of Major League Baseball, that the Mets' new stadium would likely look similar to Ebbets Field, the long-time home of the Brooklyn Dodgers. A plan for such a stadium, by HOK Sport+Venue+Event, with a brick-and-limestone facade and exposed steel girders, was first proposed by the Mets in 1998. The cost of the stadium, Wilpon said, would likely be around $600 million, paid for by the Mets. Construction will begin next year, regardless of whether the city wins its Olympic bid. The city and state plan to provide $180 million to upgrade supporting infrastructure, and about $100 million to make the stadium Olympic-ready, if necessary. NYC2012, the committee organized to bring the Olympics to New York, will contribute $142 million toward this cost. The 35,000-seat addition required for the games would be removed after their conclusion.

Unlike the Manhattan stadium, there appears to be little political opposition to the Queens stadium plan, which would also include press and broadcast centers, to be built near the stadium in Willets Point. New York is competing with London, Paris, Madrid, and Moscow for the 2012 games. The host city will be chosen on July 6 in Singapore. *S.L.*



GOOD DESIGN

By combining state-of-the-art functionality with bold styling, our Thermador Professional® Series perfects the cooking experience. From powerful ranges and cooktops, to ovens, ventilation, dishwashers and the quietest refrigerators on the market, you'll find owning a Professional Series kitchen ignites your inspiration while expressing the epitome of American luxury. And now, all award-winning Professional Series ranges and cooktops feature Thermador's True Blue™ knobs, a revival of our classic 1955 knob design. Thermador—empowering the kitchen enthusiast for more than 70 years.

Thermador Professional® Series ranges and cooktops were recently awarded the Good Design Award for excellence in industrial design by the Chicago Athenaeum Museum of Architecture and Design.

WWW.THERMADOR.COM 1-800-656-9226

Thermador® | An American Icon™

CIRCLE 15 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Enrique Norten wins competition to design Guggenheim Museum in Mexico

A jury formed by the Guggenheim Foundation has chosen Mexican firm Enrique Norten/TEN Arquitectos to develop a conceptual design for its proposed Guggenheim Museum in Guadalajara, Mexico. The other competitors in a limited competition were Ateliers Jean Nouvel, and New York–based Asymptote.

Norten's scheme includes a rectilinear, glass-enclosed tower that would rise high over the Barranca, a 2,000-foot gorge at the northern edge of the city. The white tower's verticality, said competition jurors, represents a striking contrast to the sprawling city's "overwhelming horizontality," according to comments made by the jury, which included Frank Gehry, FAIA, Guggenheim director Thomas Krens, and Guadalajara's Mayor Emilio Gonzalez Marquez. They also noted it helps provide the iconic presence that has become a characteristic of the Guggenheim's museums.

The tower, if built, will be composed of a series of stacked, white steel boxes of different sizes and configurations. These will serve as galleries, which will display art from the Guggenheim's collection and also feature contemporary Latin American work. "It's almost like a 3D Tetris," explains Norten, who designed the recent *Aztec Empire* show for the Guggenheim, and is working with engineers Arup and Guy Nordensen. Interstitial spaces between the boxes will accommodate public congregation, and the structure will be wrapped in a double skin of glass. The innermost of these skins will be sealed. A large open space at the top will either serve as a gallery or a roof garden, while elevators will be suspended off the side of the building, forming an attraction in themselves.

The building will have its own plaza, designed by landscape architect James Corner of New York–based Field Operations. Its texture will gradually change from hardscape to trees and greenery, Norten notes.



The glass tower would draw attention.

Guadalajara seems to have discovered architecture as a means toward establishing itself as a cultural capital. The city's planned JVC project [RECORD, June 1999, page 119], in which Norten has had an active role, will also include architecture by Wolf Prix, Jean Nouvel, Thom Mayne, FAIA, Zaha Hadid, Daniel Libeskind, Carmen Pinault, Tod Williams Billie Tsien, and Philip Johnson/Alan Ritchie Architects.

Guggenheim spokesman Anthony Calnek stresses that a Guadalajara branch is not a sure thing. The museum, with consulting firm McKinsey & Company, is now undertaking a feasibility study, to be completed in August. Nevertheless, the plan represents another significant step by Krens to expand the Guggenheim's international reach. Since taking over as director in 1988, he has developed new branches in Bilbao, Berlin, and New York City's SoHo area (this branch has closed). He recently developed plans for museums in Taichung, Taiwan (but it appears that the local government will not have enough funds to support it), and Rio de Janeiro—which was delayed by court injunction, and has now been abandoned. A branch in Las Vegas closed in 2001, although part of that museum, the Guggenheim Hermitage, is still open.

The Guadalajara project will likely be paid for by a combination of local and federal Mexican funds, notes Calnek. "The board has decided in a broad way that it's appropriate to proceed globally with expansion," he adds. "However, it's still considering in detail what the limits on that expansion will be." *S.L.*

National Trust releases "11 Most Endangered" list

The National Trust for Historic Preservation in early June released its annual list of the nation's 11 most endangered historic places. The list, first issued in 1988, serves as a preservationists' call to arms on behalf of sites deemed threatened by "neglect, insufficient funds, inappropriate development, or insensitive public policy," according to the trust.



Frank Lloyd Wright's Ennis-Brown House.

Ernest Hemingway's Finca Vigía, or "Lookout Farm," located near Havana, Cuba, is the trust's first-ever extraterritorial listing. The now-dilapidated house was built in 1886, and the author lived there from 1939 to 1960. A survey team will visit this summer, says Peter Brink, the trust's senior vice president of programs.

This year's list also includes historic buildings in downtown Detroit, some of which stand in the way of the city's plans for hosting the 2006 Super Bowl. Such a wide-reaching designation is rare for the trust, which previously flagged the historic buildings of Lower Manhattan and Vermont. Detroit's endangered buildings, mostly dating from 1910 to 1940, include Art Deco, Art Moderne, neo-Gothic, Neoclassical, and Beaux-Arts structures, according to local architect and preservationist Douglas McIntosh. They include the work of George Post; McKim, Mead and White; and Albert Kahn. Major recent losses in the city include the Statler Hilton Hotel and the Madison-Lenox.

Also highlighted are properties of the Roman Catholic Archdiocese of Boston, which is selling churches and other buildings in more than 80 of its 357 parishes. Development plans threaten many of these structures. In Los Angeles, Frank Lloyd Wright's 1924 Ennis-Brown House, the last of his "textile block" designs, is crumbling, its steel reinforcing bars rusting and concrete blocks falling apart due to water damage. Recent mudslides and the 1994 Northridge earthquake have also caused extensive damage.



Ernest Hemingway's home, Finca Vigía.

For the complete list, go to www.nationaltrust.org/11Most/2005

Ted Smalley Bowen

If you look real close you can see 25 years of fire-rated glazing experience reflected in it.



SCHOTT PYRAN® fire-rated glass-ceramics are an architect's best friend.

PYRAN® is everything you've been looking for in fire-rated glass. It's fire-protective, impact-resistant and, aesthetically speaking, quite fetching. PYRAN® Crystal offers the highest standard of clarity, transmission and true color rendition. And PYRAN® Star is both beautiful and economical. PYRAN® is available with a surface applied film, laminated or polished. It comes in large sizes and is easily accessible through distributors, fabricators and glaziers. For new construction or retrofit, spec the glass with a loyal following among fire professionals – PYRAN®.

Home Tech
SCHOTT North America, Inc.
Phone: 502-657-4417
Fax: 502-966-4976
E-mail: pyran@us.schott.com
www.us.schott.com/pyran
©2005 SCHOTT North America, Inc.
® PYRAN is a registered trademark of SCHOTT AG, Mainz, Germany

CLASSIFIED UL

SCHOTT
glass made of ideas

CIRCLE 16 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

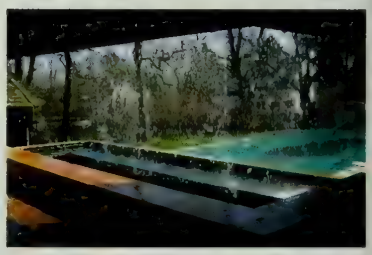
MODERN FAN

World Trade Center Memorial mock-up helps designers plan for the future

The World Trade Center Memorial, called "Reflecting Absence," which will consist of waterfalls flowing into representations of the voids left by the Twin Towers, won't be finished for years. But a mock-up corner section of one of its voids has been built in the backyard of Toronto resident Dan Euser, a consultant to the project.

The $175,000 model, 27 feet high, is made of 300 plywood sheets and powered by three 10-horse-power pumps that send water over a serrated ledge. Since January, Euser has used the model to examine issues like splashing, noise levels, self-cleaning, the effects of wind, and freezing. (Toronto's cold winters makes it the perfect location to test this last issue.)

Memorial designer Michael Arad, who has visited the mock-up several times, notes that thanks to testing, his team has opted for individual streams of water instead of a continuous wall of water, its original plan, which he says would be overwhelming visually and aurally. The team is still determining how much wind the waterfalls will be able to withstand, noting that when levels reach a certain point, the water will be turned off. Meanwhile, the best way to prevent freezing, he says, is simply "to keep running it." *S.L.*



A view from beneath the mock-up.

$800 million slated for Lower Manhattan improvements

Amid increased scrutiny over the pace of development in Lower Manhattan, New York's Governor Pataki and Mayor Bloomberg on May 25 announced plans for more than $800 million in new investment in the area. Much of the money appears to be geared toward cultural and residential improvements, likely aimed at attracting more residents to the increasingly popular area. The plans include a $300 million pledge by the governor toward the World Trade Center Memorial.

The funds, which constitute the remainder of federal money given to the Lower Manhattan Development Corporation (LMDC), include $100 million in neighborhood amenities like schools, cultural facilities, parks, and playgrounds. An additional $300 is earmarked to fund the revitalization of Fulton Street, the East and West Side waterfronts, and the Greenwich Street south area. A promise of $32 million has been made for improved Chinatown access, and about $50 million has been dedicated to revitalizing more than 3,000 units of affordable housing.

Answering concerns that the plans would fail to draw businesses, LMDC president Stefan Pryor notes that improvements like pedestrian plazas are meant primarily for workers, while planned streetscape and storefront improvements will also lure companies.

More than $300 million has been slated for the World Trade Center Memorial, which it has been estimated will cost over $500 million, and has thus far struggled to find substantial funding. While the LMDC has now received all of its federal funding, spokesperson Joanna Rose notes that the organization will remain very busy allocating funds and ensuring the timely delivery of Lower Manhattan projects. *S.L.*

ul Cezanne, The Card Players 1890-95
usee d'Orsay, Paris, France

www.modernfan.com
CIRCLE 18 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Managing light and energy is the art of solar control. At MoMA, a Nysan® shading system transitions from a blackout shade to a 5% openness at the touch of a button while keeping the fabric stable and the reveal clean. For 80 years, architects and designers have turned to Hunter Douglas for innovative interior and exterior solar control.

Project: Museum of Modern Art, New York, NY
Architects: Yoshio Taniguchi and Associates and Kohn Pedersen Fox Associates
Product: Nysan Motorized Skylight Shades

©2005 Hunter Douglas Inc. ® Trademark of Hunter Douglas Inc.

HunterDouglasContract

SOLAR CONTROL

For literature and our email newsletter, call toll-free 800-727-8953 or visit www.hunterdouglascontract.com

CIRCLE 148 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS



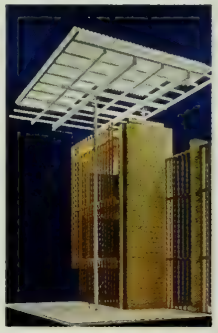
CIRCLE 118 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Record News

Piano's updated plans for Chicago Art Institute include new "flying carpet"

The Art Institute of Chicago revealed Renzo Piano's revised plans for a new addition in a daylong series of events on May 31. The 264,000-square-foot addition, which will face the city's acclaimed Millennium Park, has been subtly modified in size, configuration, and materials. The building's signature element, a "flying carpet" canopy, was initially conceived in glass, but is now proposed as a 216-foot-by-216-foot light-shading device made of sleek aluminum fins that will "float" above the building's gallery spaces.



Piano's canopy will now be made of aluminum, not glass.

The current proposal also adds a 900-foot-long bridge that starts near the lawn of Frank Gehry's Millennium Park bandshell and rises to a third-floor outdoor sculpture terrace and dining facilities for the museum. Piano describes his straight and thin-edged design as a "knife" that will contrast with the "lazy river" of Gehry's nearby BP Bridge.

Piano's original design was unveiled in May of 2001 and was to have been completed in 2006, but $110 million remains to be raised for the $258 million structure and its endowment prior to the start of construction.

Piano's design for the museum will remain on view in an exhibition entitled *Zero Gravity: The Art Institute of Chicago, Renzo Piano, and Building for a New Century* through October 2. The museum expects to open the new structure in the spring of 2009. *Edward Keegan*

Whitney expansion wins preservation okay

The New York City Landmarks Preservation Commission on May 24 voted unanimously to approve a scaled-back expansion plan by the Whitney Museum of American Art.

Preservationists had objected to Renzo Piano's initial plan, unveiled in late 2004, because it would have meant demolishing several brownstones adjoining the museum—including one considered a "contributing building" to the surrounding historic district. To spare this brownstone, Piano halved the width of his entrance plaza to 16 feet.

"The vote was tremendously important," says Adam Weinberg, the museum's director. "After 23 years of wanting to expand, the Whitney is expanding." Two previous expansion attempts, with designs by Michael Graves and Rem Koolhaas, both failed.

Some observers believe that the memory of these failed attempts prompted the Whitney to scale back Piano's entrance plaza. "It was a major concession," says Roger Lang, director of community programs at the New York Landmarks Conservancy. "My hat's off to the Whitney and to [Piano] for being flexible." Weinberg says that the Whitney won "90 percent" of what it wanted; he also noted that the overall square footage of Piano's new building remains unchanged. The museum will now seek zoning permits from the city and, following a capital campaign, could begin construction by 2007. ***James Murdock***

Choices

nPro Corporation is the first manufacturer to introduce
ıstainable wall protection products. We embrace the Original
ıviroGT Sustainable Wall Protection and will continue to
:pand upon it. In addition, we will always offer our full line
products manufactured from aluminum, rigid and flexible
/C, maple, red oak and polycarbonate. We believe in providing
oduct choices to our customers for all applications.









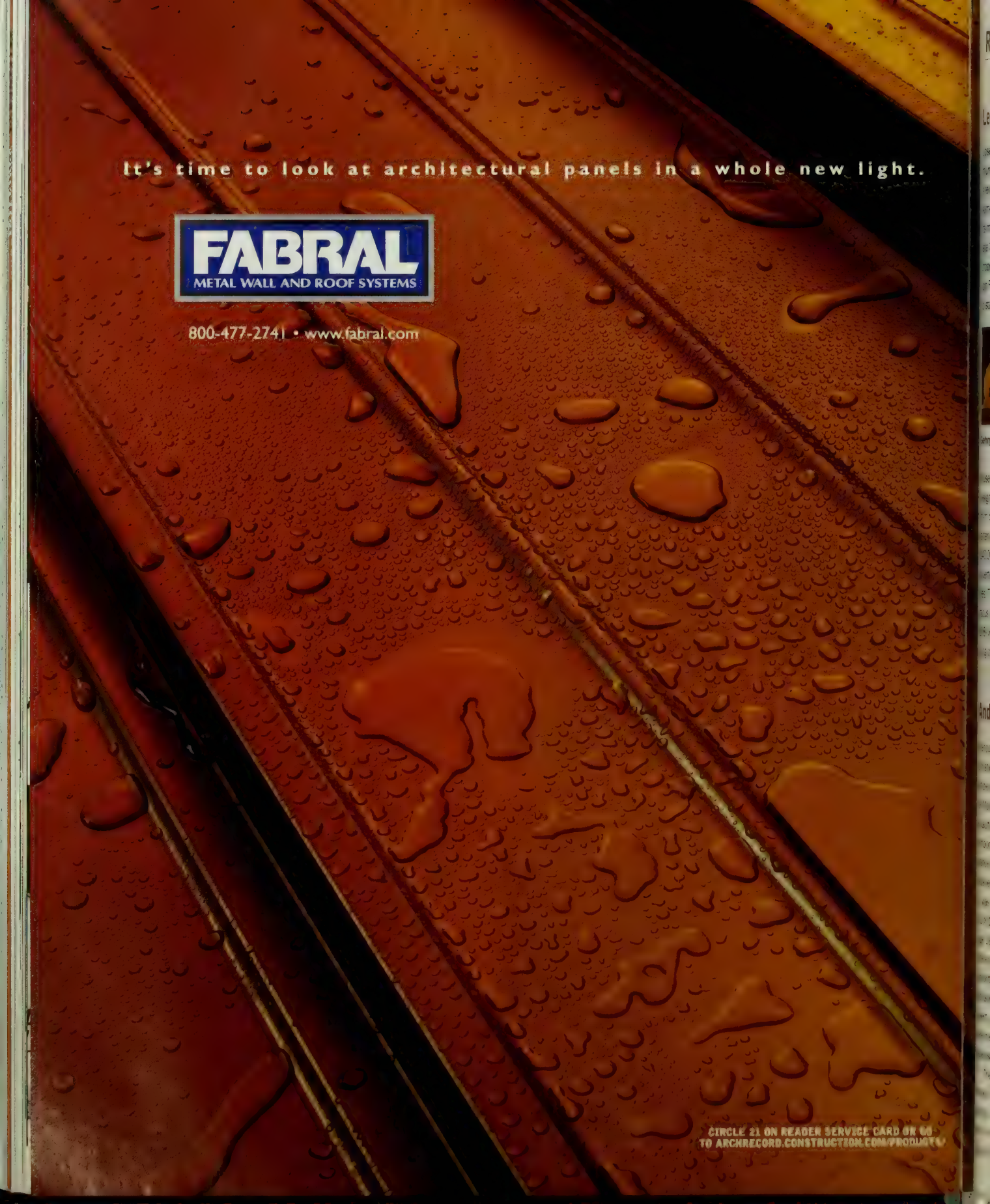


InPro Corporation
Interior and Exterior Architectural Products

Call 877.780.0034
or visit inprocorp.com
to learn more.

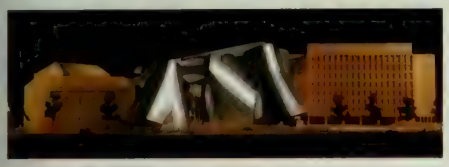
InPro Shop
inprocorp.com
Shop our site to purchase a select line of InPro products!

CIRCLE 20 ON READER SERVICE CARD OR GO


It's time to look at architectural panels in a whole new light.
FABRAL
METAL WALL AND ROOF SYSTEMS
800-477-2741 • www.fabral.com
CIRCLE 21 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Letdown: D.C. shelves two ambitious projects

Upsetting many in its design community, Washington, D.C., recently shelved two daring projects that some hoped would inject vitality into its mostly Classical landscape. In late May, the Corcoran Gallery of Art dropped plans for a curving, $170 million Frank Gehry–designed wing, due to stalled funds and internal changes.



Gehry's proposed addition to the Corcoran.

Museum director David C. Levy resigned on May 23 under pressure from board members, who said that faltering fund-raising efforts for the 140,000-square-foot addition diverted resources from other priorities. The museum is now shifting its focus toward repairing its existing 108-year-old Beaux-Arts building. The wing could be revived if donors came up with $100 million, say officials.

"Washington's public architecture remains conformist, with few exceptions," says Peter Waldman, an architecture professor at the University of Virginia. "Gehry's project was amazingly adventurous, and would have opened new visions."

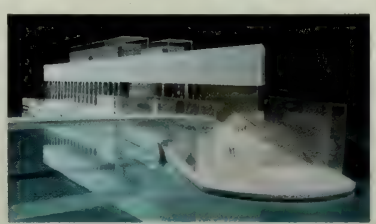
Meanwhile, after approving preliminary designs last year, the National Capital Planning Commission rejected Norman Foster's undulating glass canopy for the courtyard of the Old Patent Office Building on June 2. Key historic-preservation groups had complained that the canopy was too high and spoiled the character of the 1830s Robert Mills building. Work continues on the two Smithsonian Institution museums housed inside the Greek Revival building, the Smithsonian American Art Museum and the National Portrait Gallery. *Tony Illia*

Ando's Pinault project canceled in Paris

François Pinault, owner of Gucci and Christie's, announced on May 9 in an article published by French newspaper *Le Monde* that he was canceling the Pinault Foundation, a museum of contemporary art in Paris. "The power of France is the power of culture," said Japanese architect Tadao Ando when he was selected to design the project in 2001 [RECORD, December 2001, page 29]. But Pinault might have a different view. He says that local authorities' bureaucratic slowness and lack of interest killed the project, noting, "All of my requests were met with imprecise responses and vague promises."

The ambitious scheme, shaped like the prow of a ship cutting into the Seine River, was to have been built on the Seguin Island, site of the former Renault automobile factories, at the western entry to Paris. The 325,000-square-foot building was designed with a broad staircase at the front and glass walls on the sides.

Pinault has since purchased about 80 percent of the Palazzo Grassi in Venice for about $36.5 million. Substantially smaller than the Paris project, the Palazzo is located on the Grand Canal and until recently hosted major art shows financed by Fiat. *Philip Jodidio*



Ando's nautical design on the Seine.



CIRCLE 22 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

quiet down & lighten up
with QUILITE®



Noise Barriers

Post/Panel System of Polycarbonate Modules
Corrugated on Both Sides for
Noise-cutting Performance
Light Transmission
Graffiti Resistance

QUILITE®
INTERNATIONAL
1616 La Tijera Blvd, Suite 509, Los Angeles, CA 90045
Tel 310.641.7700 Fax 310.641.7768 info@quilite.com quilite.com

CIRCLE 23 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

New Yankees stadium will look to the past and the future

The Mets aren't the only New York baseball team planning a new stadium (page 26). After more than 80 years at Yankee Stadium, otherwise known as "The House That Ruth Built," the New York Yankees announced on June 15 that they will be moving to a new home. It will be built just to the north of the existing stadium, which will be demolished.

Designed by HOK Sport+Venue+Event, the new Yankee Stadium will be loosely modeled on the original. The exterior will feature an approximation of the stadium's original frieze, with limestone walls and arched fenestration. Much of the original facade was removed when the team renovated the stadium in 1973. A large open-air concourse will sit between the facade and the stadium bowl. Inside, the field will maintain the same dimensions, including its shallow right field and "monument park," which contains tributes to the team's most famous players.

Team officials point out that the new stadium will feature more modern amenities, including 57 luxury boxes, a 400-foot-wide television screen, wider concourses, and far more concessions. Seats will also be about 20 feet closer to the field, notes HOK Sport principal Earl Santee, AIA. In the past 10 years, his firm has built all but a handful of the country's new baseball stadiums, including Baltimore's Oriole Park at Camden Yards, which helped spark the "retro" stadium craze.

"This building is becoming nonfunctional," pointed out Yankees president Randy Levine, of the original stadium, built in 1923. "It can't go on for another 40 years." Santee added that the Yankees, who have talked about leaving their home for at least 10 years, explored the option of renovating the existing stadium, but found the proposal cost-prohibitive and inconvenient, since the team would have to relocate during the rehab.

The new 50,000- to 54,000-seat stadium is set to open in 2009, and the Yankees will pay its estimated $800 million cost. The team will also pay for its upkeep. The state plans to chip in $70 million for two new parking garages, while the city expects to pay $135 million for new park and sports facilities in the area, including a track and a baseball field where Yankee Stadium now stands. The plan, observed Mayor Bloomberg, is part of an almost $400 million transformation of the South Bronx, which includes a proposed hotel and convention center, new and rehabilitated parks, and a new fish market at Hunt's Point, which will replace the Fulton Fish Market in Lower Manhattan.



The stadium will be wrapped in a historic-looking facade.

Unlike the proposed Jets Stadium on the Far West Side, the Yankees' new stadium, like the Mets' new park, appears to face few political obstacles. Its biggest opponents, it appears, are design critics, who have called the new plan "watered down" and "formulaic," and fans, who don't want the team to leave its beloved home, which has hosted 33 World Series. *S.L.*

IMAGE COURTESY NEW YORK YANKEES



Ian Schrager sets his sites on residential

Ian Schrager reinvented New York nightlife with Studio 54 and later focused on his hotels, which featured employee uniforms by Giorgio Armani and architecture by Philippe Starck. Now Schrager is homing in on the luxury apartment with his concept of a "hotel-serviced residential lifestyle."

Schrager has hired British architect John Pawson to design 23 condominiums at 50 Gramercy Park, an 18-story, 1924 structure. The building is an annex to the Gramercy Park Hotel, which Schrager's team, led by Anda Andrei, is renovating. Condo owners will receive special services like personal massage, shopping, pet care, child care, and access to hotel facilities.

Complementing this pampered lifestyle is Pawson's Minimalist design (left), with cherry wood kitchens, white oak floors, cream-colored travertine surfaces, and even custom-designed doorknobs and bathroom fixtures. Each apartment will have its own distinctive layout, and range in size from 1,778 to 4,289 square feet, with lofty ceiling heights up to 12 feet 4 inches. Prices range from $6 million to $16 million.

The exterior, with floor-to-ceiling windows and exterior metal girders, will form a striking contrast to much of the historic neighborhood. Local residents were first anxious, but many now appear assuaged. "We see that it's very elegant," says Arlene Harrison, president of the Gramercy Park Block Association. "It's like bringing a modern painting into a very traditional home." Completion is slated for January 2006. *Alex Ulam*

Halifax project ruffles traditional feathers

Halifax, Nova Scotia, is to Canada what Boston is to the northeast U.S.: a historic port city committed to preservation and to its popular waterfront. The difference is that Haligonians, as they are called, tend to be more conservative about waterfront development.



The towers' twists are meant to improve views.

Hence a recent proposal to build a $121 million, mixed-use project a few blocks from that waterfront has stirred mixed reactions. The two 27-story glass towers—one a hotel, the other a condo—set on a transparent, four-story retail/restaurant/office podium, are being designed by Toronto-based Hariri Pontarini Architects and developed by United Gulf Developments. The buildings, 700,000 square feet in all, twist away from each other, creating open views of the nearby harbor and the city's 19th-century downtown.

Several residents at a recent public information session favored a traditional look and are seeking to kill the project. But others, like Lucy Trull, a planner with Halifax's Dalhousie University, think the city shouldn't cling so tenaciously to the past that it "can't envision a future waterfront without replicas of heritage buildings." The Halifax Waterfront Development Corporation and the Halifax Regional Municipality will vote on the project late this summer. *Albert Warson*

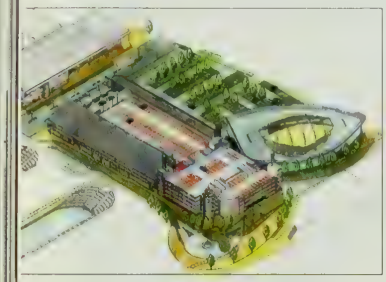


Houston: ELEGANT ADDITIONS, Phone (713) 522-0088.
New York: AF NEW YORK, Phone (212) 243-5400.
DAVIS & WARSHOW, Phone (212) 688-5990.

MEM

With MEM, Dornbracht presents a new sphere of elemental fitting aesthetics. Its conscious understated approach turns the washing experience into a direct encounter with the element of water. Just like the surge of a clear, natural spring. MEM was designed by SIEGER DESIGN. Our brochure MEM may be ordered from: **Dornbracht USA, Inc.**, 1700 Executive Drive South, Suite 600, Duluth GA 30096, Phone 800-774-1181, Fax 800-899-8527, E-Mail mail@dornbracht.com www.dornbracht.com

CIRCLE 24 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The park will be located on the site of a former naval dockyard.

Great Expectations: Dickens World will make rides out of books

A new $113 million theme park, dubbed "Dickens World," a celebration of the 19th-century British literary giant, is due to be built on the 340-acre site of a former naval dockyard in Chatham, England.

The project is being designed by London-based Kemp Muir Wealleans, also responsible for the area's master plan (including housing, restaurants, and shops) and a new shopping center in a converted cast-iron Victorian building. The project is set to open in 2007.

Occupying 4 acres, Dickens World will feature a Victorian music hall, with facilities for TV and radio broadcasting, and rides based on classics such as *A Tale of Two Cities*, *The Pickwick Papers*, *David Copperfield*, and *Great Expectations*. The park will also re-create the novels' 19th-century London architecture and street scenes.

Dickens, who lived in Chatham for five years as a child, included many scenes and characters from the town in his writings. The park, the brainchild of London businessman Kevin Christie, is expected to attract 300,000 visitors a year and introduce a younger generation to the author. *Lucy Bullivant*

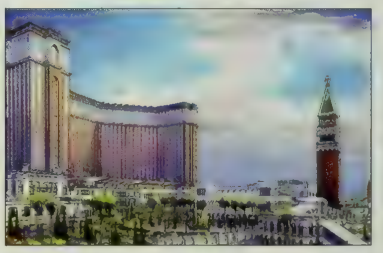
Another Venetian, this time in China

As if Las Vegas developers weren't expanding their city's offerings quickly enough, now one is preparing to build a copy of the Vegas Strip's Venetian Resort on Macau, a Chinese island off of Hong Kong.

Developed by Las Vegas Sands, the 10.6 million-square-foot, 3,000-room hotel-casino, designed by HKS with Wilson and Associates (both based in Dallas) will once again feature simulations of Venice landmarks like the Doges Palace, the Rialto Bridge, and several famed palazzos. But the Macao resort will be roughly three times the size of the Vegas version, or as HKS principal Jeff Jensen notes, "like a Venetian on steroids."

The resort will include more than 1,500 feet of retail-lined canal, three-times the length of the Vegas one, and 500,000 square feet of gaming, five times that of the original. The complex will also contain a 15,000-seat arena. Jensen says that his clients chose a tested theme strategy over one of the Modern designs that many Vegas developers are using: "We said, why recreate the wheel?"

Macau, once a Portuguese colony, has long been the center of Chinese gambling. But it has been afflicted with crime and poverty. Developers, mostly from Las Vegas, are hoping to change that in developing the "Cotai Strip," a line of high-end casinos being master planned by SOM and EDAW [RECORD, October 2003, page 38]. The market looks strong. Jensen says that when the client's Sands casino opened on Macau, visitors literally tore the doors off. *S.L.*



IMAGES: COURTESY LAS VEGAS SANDS, INC.

BSD speclink

LEED

Specifications and built-in automation for simplifying LEED certification:

- Two new intelligent checklist sections automatically activate relevant green sections and select specific provisions
- Green building provisions added to relevant sections
- LEED submittals added to relevant sections
- Automatic LEED submittals report

1-888-BSD-SOFT 1-888-273-7638
Visit our website: www.bsdsoftlink.com

Microsoft GOLD CERTIFIED Partner

BSD Building Systems Design, Inc.

Exclusive offering of CSI-DBIA and BSD.

CIRCLE 25 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

News Briefs

Russia's Melnikov house to become museum Viktor Melnikov, son of Constructivist architect Konstantin Melnikov, has announced that he will turn over his father's famed Melnikov House, along with its collection of artworks, to the Russian government on the condition that it establish a museum and renovate the house.



Melnikov house's rhomboid windows.

The house has been a Modernist landmark in Moscow for nearly 80 years. Built by Melnikov for his family between 1927 and 1929, the building became one of the most celebrated Constructivist designs. It was the only private house built in Moscow during the Soviet period. Gradually, Melnikov fell out of favor with the regime and was expelled from architecture in 1937. He lived in seclusion at his house until his death in 1974. It has been occupied by his son ever since.

The building is composed of two interlocking cylinders with rhomboid windows. It has been deteriorating steadily in recent years, especially after an unsuccessful restoration attempt in the late 1990s. Despite Viktor Melnikov's decision, a family dispute over succession rights is likely to cloud the future of the masterwork. *Paul Abelsky*

Alaska Capitol project on hold The new Alaska Capitol project in Juneau [RECORD, May 2005, page 34] has been put on ice. Just two months after selecting Santa Monica–based Morphosis to design the project, Mayor Bruce Botelho said that plans were on hold due to lack of funds. When it became clear that the legislature would not appropriate money for the building during this session, which ended on May 10 and doesn't resume until January 2006, the Juneau Assembly decided to reassess its options.

"There never was a guarantee of funds," says Maria Gladziszewski, special projects coordinator for the city. Mayor Botelho remains committed to making the project happen. Yet, without the interest of Alaska's Governor Frank Murkowski this may prove to be a formidable challenge. "The governor's support evaporated," says Gladziszewski, "I don't know what will happen." *A.M.*

Architecture stamps released On May 20, the U.S. Postal Service released its "Masterworks of Modern American Architecture" stamps series. The images of 12 iconic American buildings, built between 1930 and 2003, will be sold for the next year. After a recommendation from the Citizens' Stamp Advisory Committee—a group of volunteers who review public suggestions for stamp design—the postal service selected the black-and-white photographs, taken by the likes of Ezra Stoller and Margaret Bourke-White. Featured buildings include Frank Lloyd Wright's Guggenheim Museum and William Van Alen's Chrysler Building in New York, the Vanna Venturi House in Philadelphia by Robert Venturi, Chicago's Hancock Center by SOM, and Richard Meier & Partners' High Museum in Atlanta. *Larissa Babij*



A plethora of archi-stamps.

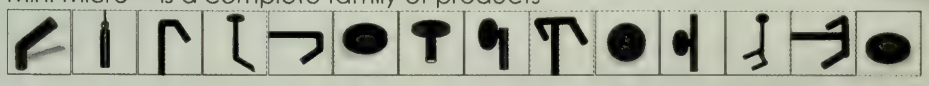
INTRODUCING THE NEXT BIG THING IN LIGHTING



Winner of the Best of Category Award for Specialty Luminaires at LIGHTFAIR 2005

Introducing Mini-Micro™, a product less than half the size of our original MR16 fixture. Mini-Micro's™ incorporate new halogen and solid-state technologies that enable an incredible reduction in fixture size, without sacrificing performance.

Mini-Micro™ is a complete family of products



shown actual size

B-K LIGHTING
Quality to Last a Lifetime™
559.438.5800 • www.bklighting.com

CIRCLE 26 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Vitracolor GLASS

OPAQUE COLORED GLASS IS STRIKING IN STRIPES

Glass for interior and exterior surface applications. Thirty striped and solid colored offerings.

SKYLINE DESIGN
ARCHITECTURAL ART GLASS

Tel: 888.278.4660
www.skydesign.com

Made in Chicago

High Line gains federal approval New York's $65 million High Line project to transform an unused railway in the city's Meatpacking District into a visionary promenade has cleared its last major hurdle. On June 13, the Surface Transportation Board, the federal authority overseeing railways, issued a certificate of interim trail use. The order allows New York to negotiate a transfer of the High Line's ownership from CSX Transportation to the city for reuse as a public space. Such reuse, converting railways to trails, was made possible by a program called "Railbanking," adopted by Congress in 1983. "This is the most important victory yet for the High Line," says Robert Hammond of Friends of the High Line, the nonprofit organization behind the plan. The group now hopes to break ground in late 2005. The project will be designed by New York–based Field Operations and Diller Scofidio + Renfro. *Ilan Kayatsky*

Designation for Lapidus hotel in New York The New York City Landmarks Preservation Commission recently considered two Morris Lapidus buildings, which had both undergone alterations, for landmark designation. One, midtown's Summit Hotel, now known as the Doubletree Metropolitan, received designation, while the Paterson Silks building, at Union Square, did not. Lapidus is best known for the Fontainebleau Hotel in Miami and other flamboyant Modern buildings.

The Metropolitan, which opened in 1961, has a distinctive undulating facade more reminiscent of a Modernist Miami hotel than one in New York. It had undergone minor alterations to its Lexington Avenue facade, though window replacement and other changes were planned. The much smaller building at Union Square, erected in 1949, featured a glass and steel entrance tower, which was demolished just before announcement of the designation hearing. The commission considered the demolition to have destroyed the integrity of the building. *A.B.*



Lapidus's Metropolitan.

Parachute Pavilion for Coney Island London-based architects Kevin Carmody, Andrew Groarke, Chris Hardie, and Lewis Kinneir have won a competition to create a "Parachute Pavilion" adjacent to the Coney Island Boardwalk's famous Parachute Jump. The competition, launched in 2004 by the Van Alen Institute, a local organization dedicated to improving the public realm, and by the Coney Island Development Corporation, attracted over 850 entrees. It is part of the effort to revitalize the once-flagging neighborhood, including a renovated subway station and a new baseball park.

The pavilion will include a 7,800-square-foot glass-enclosed structure lit up by a dense pattern of light bulbs, a high-ceilinged exhibition space, a restaurant, a bar, and a souvenir shop. The structure will be cantilevered above a public space, providing shade, and the surface will be multicolored and bright, evoking Coney Island's historic amusement park.



Renderings of Coney Island's Parachute Pavilion.

Carmody and Groarke have designed Dolce & Gabbana stores around the world. Along with Hardie, they also won Chicago's 2004 Burnham Prize for their design of a trio of water-taxi stations. Lewis Kinneir recently joined the team. *I.K.*

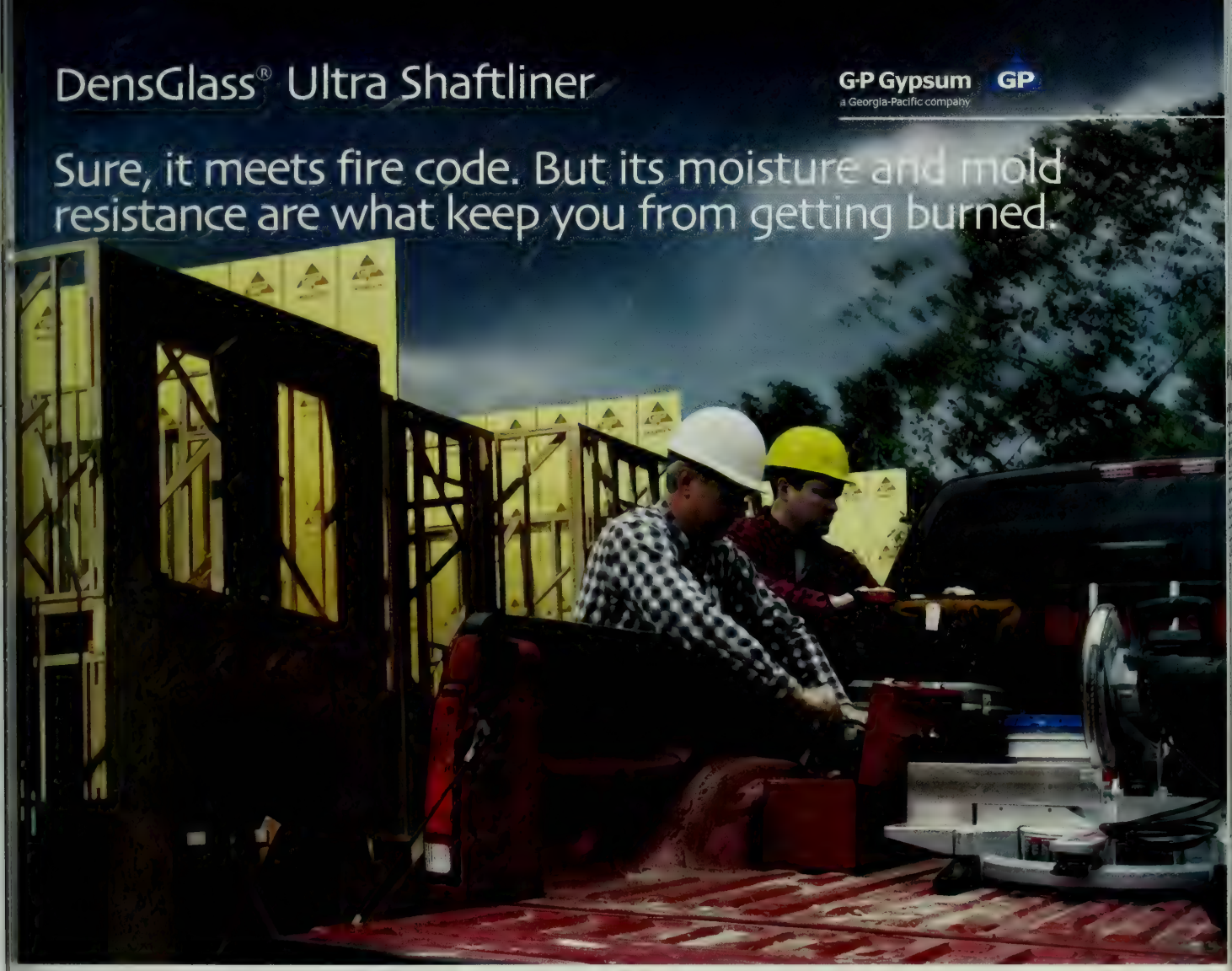
Radical changes for Brooklyn Waterfront With an okay by the New York City Council in May, industrial North Brooklyn will soon become the hub of a major redevelopment effort, and possibly set a striking precedent for affordable housing. A rezoning plan by the city will allow residential and commercial development within 175 blocks of Greenpoint and Williamsburg, gritty neighborhoods whose manufacturing sectors have declined in recent decades. The area boasts dramatic views of Manhattan across the East River. The proposal includes over 10,000 new units of housing, with a third of those affordable. If they provide enough affordable units, developers would be permitted to build up to 35 stories (or, if not, 23 stories). The plan also calls for 54 acres of parkland, including a waterfront esplanade. Though some locals are concerned with the prospect of apartment towers looming over the much lower-density waterfront, most public officials have been enthusiastic about the plan. *I.K.*

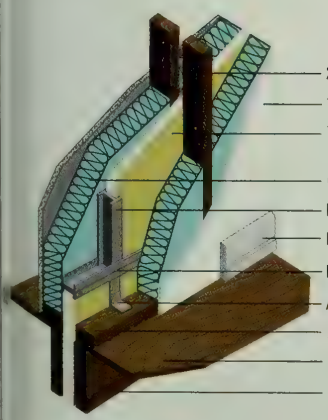
CIRCLE 27 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

DensGlass® Ultra Shaftliner

G-P Gypsum GP
a Georgia-Pacific company

Sure, it meets fire code. But its moisture and mold resistance are what keep you from getting burned.





When your worksite is left exposed to the elements, are you left wide open to potential problems? Not if you're using DensGlass Ultra Shaftliner—the area separation panel with a non-combustible gypsum core* to handle the heat plus a glass mat surface that helps protect against the growth of mold† *and costly callbacks for remediation or delamination.* Unlike paper-faced shaftliners, which are vulnerable to moisture damage, DensGlass Ultra Shaftliner can be left exposed to the weather for up to six months—allowing your construction to continue without worry. So be sure to use DensGlass Ultra Shaftliner. It's the area separation panel that has you covered like no other.

GP DENSGUARD™ | DENSGLASS® Shaftliner ULTRA

WWW.GPGYPSUM.COM **GP TECHNICAL HOTLINE: 1-800-225-6119**

*Provides 2-hour fire rating and is manufactured to meet standard ASTM C 442 †When tested in accordance with ASTM D 3273

DENSGLASS is a registered trademark and DENSGUARD and DENSARMOR are trademarks of G-P Gypsum Corporation. ©2005 G-P Gypsum Corporation. All rights reserved.

CIRCLE 28 ON READER SERVICE CARD OR GO

You can already tell exactly what kind of house it's going to be.



©2005 Marvin Windows and Doors. All rights reserved. ®Registered trademark of Marvin Windows and Doors





The right windows and doors help bring your plans to life beautifully. Specify Marvin, and you're assured of complete design flexibility and better-performing windows and doors with superior aesthetics. That includes furniture-grade interiors, consistent sight lines and the tightest tolerances possible — along with countless design options, from cladding profiles to hardware choices.
Call 1-800-236-9690 or visit **marvin.com**

MARVIN
Windows and Doors

CIRCLE 29 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

©2005 Johns Manville



More and more architects are specifying formaldehyde-free insulation. Must be something in the air.

Johns Manville Formaldehyde-free™ fiber glass insulation promotes better indoor air quality. Unlike other so-called "green products," JM fiber glass insulation passes Environmental Specification 1350 with non-detect for all pollutants. It's the nation's toughest indoor air quality test, and it's the standard California architects and public school officials rely on to protect 6.2 million children. That's why more architects see JM as not just the best insulation, but the right insulation.

Find formaldehyde-free specifications and more info at www.specJM.com



It's Comforting to Know We're There.™

CIRCLE 30 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

For and about the emerging architect

archrecord2

This month, archrecord2 seeks out what's current in architecture on both coasts. In Design, we travel to the West Coast to talk to Jeff Kovel of Skylab Design Group. The sleek projects produced by this firm blur the lines between architecture and design. In Work, we drop by a warehouse district in Queens, New York, to find out more on a collaboration between architects and writers during a month-long living installation.

Design

The creation of engaging spaces



The impetus behind the launch of the Portland, Oregon–based Skylab Design Group is simple: "I truly felt I could go out on my own and have the opportunity of seeing my own projects built," explains founding architect Jeff Kovel. "I didn't want to wait around for 30 years to get my start." Originally from Rye, New York, just outside of New York City, Kovel received his architecture degree from Cornell University and headed west to fulfill a passion for architecture as well as nature. After a stint at a firm in Colorado, followed by a role at Portland's Architropolis, the then-26-year-old architect set out on his own.

At the time, Kovel did not have any prospective clients. But he most certainly had a plan. He established a real estate development company to create revenue that would, in turn, fund his own architecture firm.

The first parcel of land the architect purchased had been considered unbuildable due to its steep slope. However, Kovel designed and built a spec house on the property in less than 14 months. "I had a lot of experience with hands-on construction," explains Kovel. "Many of my summer jobs were spent working for a contractor." Since the completion of the residence in 2001, it has changed hands several times, and each new owner has sought out Kovel to design yet another addition.

Kovel's next purchase was a 110-year-old building on Alder Street, not far from the Pearl District, a revitalized warehouse area in Portland that attracts crowds with restaurants, art galleries, and loft apartments. The Alder Street project includes two live/work spaces—one for Kovel and his wife, in which he dramatically removed the roof and created a lofted living space; the other for a jewelry designer. Also, at ground-level there is a storefront for a distributor of Vitra designs. While it has taken two years to complete the overhaul of the building, the end result exemplifies Kovel's design sensibility and entrepreneurial spirit. He notes, "Surrounding buildings are now also being renovated. It's an excit-



1680 House, Portland, Oregon, 2001
For Skylab's first project, a concrete house on a steep slope, the firm took on the roles of designer, contractor, and landscape architect. Its success led to more work designing spec houses in the area.





Alder Street Project, Portland, Oregon, 2005
The large area of glazing added to the side of the building now permits a dramatic view of the 160-foot spire of the church located across the street. As owner of the building, Kovel collects rent from two additional tenants.

ing time to be in this area."

Currently, Skylab's team of seven full-time employees and four interns is involved in a number of residential and commercial projects. On the boards are four custom residences, including the Stilt House—a four-story home overlooking Portland that features prime views of the city and a waterfall running through an atrium in the interior. Commercial projects across the country run the gamut from stylish restaurants and lounges, like Doug Fir, in Portland, to innovative retail and exhibition spaces for corporations including Nike, Mattel, Converse, and ESPN.

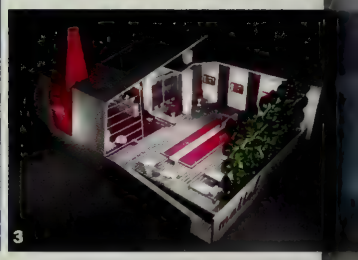
Kovel credits his firm's success to the strong identity each of his projects displays. "Our focus is not on what kind of projects we take on, but how we take them on," the architect explains. "With each project, we find a meaningful narrative and we develop a vocabulary of images." Though the projects differ in size and scope, Kovel's quest for a design that can create a unique place speaks a stylistic language that's easy to recognize in all his work. *Randi Greenberg*

For more photos on these and other projects by Skylab, go to *architecturalrecord.com/archrecord2*





2



3

Nike Retail Store, New York City, 2004 (1); Jordan XXperience, Denver, 2005 (2); tradeshow booth design for Mattel "Dream House," 2003 (3)
Kovel enjoys the opportunities to work with his corporate clients. These corporate-concept projects allow the young firm to flex its design muscles with its out-of-the-box solutions.



Doug Fir, Portland, Oregon, 2004
Kovel describes the whimsical design of this popular nightspot as an outsider's improvisation on Northwest-influenced architecture. The venue hosts a restaurant, bar, outdoor patio, and a lounge with live music on the lower level.

Work

If you build it, they will write

This past May, the Flux Factory, an art collective based in Long Island City, Queens, New York, was transformed into a writing laboratory. In the 2,500-square-foot gallery space, three novelists settled into small live/work units custom designed and built by artists and architects chosen through a competition. The installation, aptly titled "Novel," paired the designers with the writers to develop and refine their concepts for the space they would inhabit for the duration of the month. Like the writers, individually occupied with their respective narratives, each structure was self-contained; although they provided visual screens, they were still permeable to noise.

In this installation, writing became performance. Initially greeted by three apparently closed structures, visitors to the installation had varied types of visual access to observe the writers at work. The habitat of archaeologist-turned-novelist Ranbir Sidhu was constructed of stacks of wooden shipping crates; small gaps between them permitted views into his workspace. Its designers, Mitch McEwan and Kwi-Hae Kim—together called Tricky ink.—were inspired by the theme of espionage, composing one undulating wall of many storage cubicles, reminiscent of the dead-letter boxes once used by spies to transmit information.

For the writer Laurie Stone, New York–based Salazar Davis Architects built a shelter that demonstrated efficient use of space. A white cube with semitranslucent walls, offset diagonally from the corner of the gallery, glowed from within; interior light elegantly revealed both the cube's structure and the shadows of its contents. A long orange ramp pierced the cube on the diagonal, directing the desk and bed to be placed along adjacent sides of the box so that the workspace was barely visible from the sleeping space and vice versa.



The luminous living quarters designed by Salazar Davis Architects.

Meanwhile, Grant Bailie, a writer and artist, inhabited an organic, earthy structure with sod roof panels planted with different grasses. Designed by artist Ian Montgomery, the walls of painted stretched canvas allowed visual access only through the slivers between points of contact with the wooden structure.

The Flux Factory experiment incubated and shielded the authors from distractions, while translucent walls or intentional gaps encouraged voyeurism into the writer's solitary process of composition. But ultimately, the habitats acted as subtle cocoons, meeting the writers' functional needs while allowing them to devote their full attention to their craft. *Larissa Babij*

For further description and images of the writers' structures, go to *archrecord.construction.com/archrecord2/*



The forecast calls for Tyvek®.

Protecting structural integrity isn't just about engineering. More and more it's about intelligent moisture management.

That's why you'll find DuPont™ Tyvek® CommercialWrap® on so many new projects.

It's the weather-resistant barrier designed specifically to help protect exterior wall systems in today's commercial construction. Tyvek® is many times more effective at water holdout than conventional building papers. It also breathes, helping to allow moisture vapor to exit the wall cavity. So walls stay dryer and building systems work as intended.

Tyvek® CommercialWrap®. Designed to protect what's important to you.

Find out more at **1-800-44-TYVEK** or **www.TYVEK.com**.

Tougher, stronger, higher-performance

DuPont™ Tyvek® COMMERCIALWRAP®

DUPONT®

The miracles of science™

Copyright © 2003-2005 E.I. du Pont de Nemours and Company. All rights reserved. Tyvek® is a registered trademark of DuPont for its brand of protective material.

CIRCLE 31 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

proven performance

structural glazing

weatherproofing sealants

consistent quality

silicone pioneer

adhesive strength

impact resistance

product longevity

green construction

problem solver

technical expertise

superior warranties

risk reduction

proactive collaboration

trusted ally

respected brand name

industry leadership

reliable supply

global resources

commitment to quality



Time Warner Center, New York, New York / **Co-Developers**, Columbus Centre Developer LLC, a subsidiary of The Related Companies, and Apollo Real Estate Advisors / **Architect**, Skidmore, Owings & Merrill LLP

One million square feet of glass to install. One chance to get it right.

Your reputation is on the line with every curtainwall project. Rely on Dow Corning for silicone adhesives and sealants that deliver uncompromising quality, superior performance and unmatched product warranties. Count on us as your global partner for outstanding service and support, innovative solutions, technical expertise and reliable supply. Do it right. Do it once. Learn more at www.dowcorning.com/constructionresources.

Construction Solutions

DOW CORNIN

©2005 Dow Corning Corporation. All rights reserved.
Dow Corning is a registered trademark of Dow Corning Corporation.
We help you invent the future is a trademark of Dow Corning Corporation. AV085540

CIRCLE 32 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Far from the madding crowd: architecture, memory, and place

Critique

By Robert Campbell, FAIA

Sometimes you have to travel to feel the fresh power of architecture. Travel does for architecture what it does for everything: It reopens the eyes and other senses to a world that, back home, has gone flat and dead from being experienced too many times. "All human pleasure," proclaimed Samuel Johnson, in his usual pontifical manner, "consists in variety."

For architecture to come fully alive, though, you need more than just being in some new place. You need to experience the architecture as if you were the inhabitant, not the tourist.

When that isn't happening, you know it. You're walking through a building—it doesn't matter how great—in a line of visitors. In the presence of such a group of viewers, the building becomes a stage set. It becomes a mere representation of itself, almost like a play or a movie. You seem to enter each room through a proscenium. The architecture becomes media. You can't interact with it, only watch it. You can't feel that you are inhabiting it. Two things exist, the show and the spectator. Those roles are clear.

Worst of all is the guide, who directs the crowd—the audience—from overfilled room to overfilled room, spouting scripted anecdotes, or maybe trivia about the furniture. You get second-hand lore in place of imaginative experience.

All this came clear to me once again on a recent trip to Mexico. I had the chance to visit the house and studio that the great architect Luis Barragan designed for himself in Mexico City. The place was closed that morning, because there was going to be some special event later in the day. My escort was Mario Schjetnan, a distinguished Mexican landscape architect and urbanist whom I'd met when he was teaching at Harvard. Luckily, Schjetnan had a special dispensation to be there that morning.



Barragan kept remodeling his house on Calle Ramirez in Mexico City, using it as a laboratory for ideas in both architecture and lifestyle.

Evoking Barragan's life

As the only people in the house, we were able to inhabit it as if we were the owners. Best of all, Schjetnan had been a close friend of Barragan's. He was able to evoke very precisely the life Barragan led there. As he did so, the house began to change.

We were, for example, in the mysteriously beautiful rear garden patio, where a high green wall of vegetation seems to look back at the house. "Barragan would phone and invite me for a tequila," Schjetnan said. "He would place two stools here"—he pointed—"and a small table. He would spread a white linen cloth over the table. We would drink our tequila. Timing was always precise. Maybe he planned to be at lunch at two; we were there for an hour of tequila, no more, no less."

What Schjetnan was doing was conjuring not only the ghost of Barragan, but the ghost of the house itself. It seemed to come alive as he described how it had interacted with the life of its owner, adjusting itself almost like a lover to his needs and desires. Schjetnan knew everything. He knew the many different colors the famous outdoor, deep-colored walls had been painted at different times. He knew where Barragan liked to eat—a tiny, spare breakfast room, not the more formal dining room. He pointed out the way concealed light

Contributing editor Robert Campbell, FAIA, is the Pulitzer Prize–winning architecture critic of The Boston Globe *and the author with Peter Vanderwarker of* Cityscapes of Boston, *published by Mariner Books.*

teases you forward. He described the carefully calibrated levels of privacy, from the front door through several decreasingly public areas to the library. "If you got this far," he said in the library, "you were an intimate friend." He pointed to Barragan's bed, a monastic cot you couldn't imagine two people fitting into. "That sends a message, doesn't it," he said. We talked about how the spaces, which look so static in photographs, now seemed to move and flow, with partitions that continuously played the game of obscuring, then revealing, an unexpected vista or a framed view of the garden.

Thanks to being the only people there, and to Mario's personal knowledge, we were able to identify with Barragan. We were able to imaginatively inhabit the spaces as if they were our own. It makes you wonder whether architecture, at least domestic architecture, can really be said to fully exist if we know it only in its physical form. Isn't architecture a collaboration between the physical shapes and spaces on the one hand, and the memory or anticipation of their inhabitations on the other?

CAN ARCHITECTURE, OR AT LEAST DOMESTIC ARCHITECTURE, FULLY EXIST IF WE KNOW IT ONLY IN ITS PHYSICAL FORM?

An unmistakable claim

On another day in Mexico City, I visited the home of the artist Frida



The Alhambra in Granada combines warrens of corridors and small rooms with great outdoor spaces.



©2005 Unico, Inc

UNICO FITS™ YOUR VISION

You see open spaces, curved walls, remarkably twisted staircases, and unique materials for your custom home. Your architect relishes it, especially the fact that he didn't have to design around the HVAC system because you chose Unico. We live for your vision. If you can plan it, we can heat and cool it. Beautifully.

By the way, have you spotted our outlets in the picture yet?

call 800 527 0896

visit www.unicosystem.com/archrecord

The Unico System®

Mini-Duct Central Heating & Air Conditioning

CIRCLE 33 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



ARCHITECTURAL HARDWARE

BRONZE

omething happens when you touch one of our handles. There's
strength and integrity you can feel. Our handcrafted hardware
cast in solid, art-grade bronze and finished in your choice of
even patinas, each with its own warmth and character. Classic,
ontemporary designs for the entry, kitchen, bed, and bath, with
quality that you'll see and feel every day, year after year.

88.552.9497
ockymountainhardware.com

ROCKY MOUNTAIN
HARDWARE

CIRCLE 34 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Kahlo, where she lived with her husband, the painter Diego Rivera (and for a time the exiled revolutionary Leon Trotsky and his wife). I didn't have a cicerone this time. But you don't really need one, because Kahlo's personality so thoroughly infuses the house that it becomes her garment. The walls are filled with portraits of her, by herself and others. There are Brownie-type snapshots of her and acquaintances, who appear all the more evocative for being grainy and strangely dressed. The objects she collected are everywhere. The unforgettable intense blue wall of her garden makes an unmistakable claim that an artist lived here. I'm not persuaded that Kahlo is a great painter, although next year's show of her work at the Walker Art Center in Minneapolis may change that. But in the house as a whole, with everything in it, including the memories of the life lived here, she created at least one significant work of art. Her presence continues to inhabit the house so powerfully that you slip easily into the role of guest, not spectator.

FRIDA KAHLO'S PERSONALITY SO THOROUGHLY INFUSES HER HOUSE THAT IT BECOMES HER GARMENT.

Staying away from Granada

As the world fills with tourists, it gets harder and harder to have this kind of experience. When people ask what's my favorite building, I usually answer the Alhambra Palace in Granada, Spain. But I wouldn't return to the Alhambra today, any more than I'd revisit the little Italian hill town of San Gimignano, which now feels as crammed with strangers as a Tokyo subway. I would be afraid of diluting my precious memory of the Alhambra.

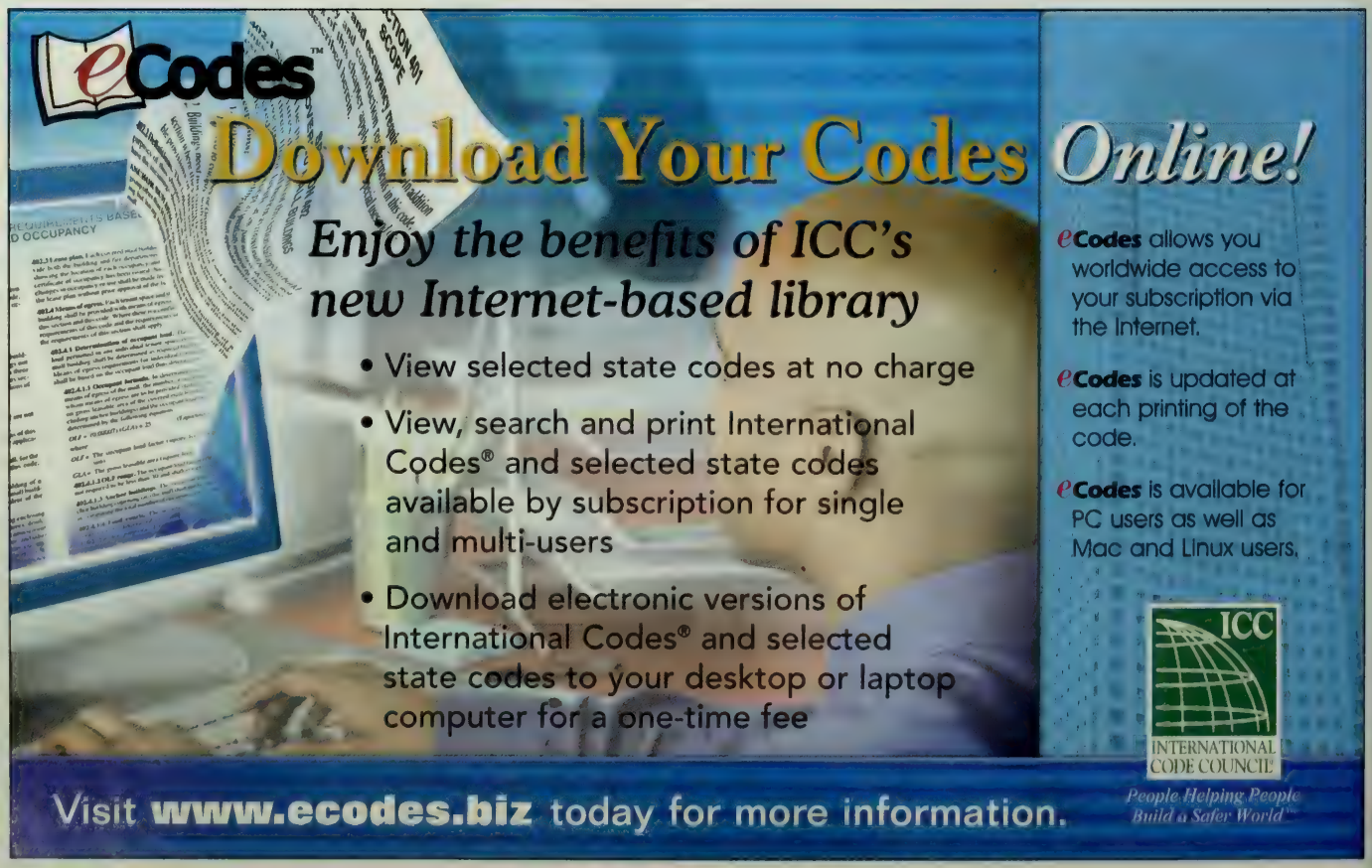
I got there at the end of a February day. My companion said she felt sick and would stay in the nearby hotel, which was a handsome converted monastery, until morning. So I walked over to the Alhambra alone.

For an hour, I had the whole place to myself. Not a face, not a Kodak, not a guidebook in sight. The Alhambra is famous for its intricate detail, but what thrilled me was the drama of its spaces. You're always exploding, from some shadowy and fascinating warren of corridors and little rooms, out into one of the great symmetrical courtyards. It's a miniature illustration of the kind of city planning advocated by Colin Rowe and Fred Koetter in their great book *Collage City*, first published in 1978. Anyway, while I did all this, the sun was gradually setting. The walls and paving were gradually reddening. Then a very light rain, almost a mist, began to fall. Surfaces took on a soft glow. I imagined myself a sultan, wandering sleepless among the rooms, maybe worrying about the Spanish kicking me out (as they soon did kick out the Alhambra's Moorish creators—the Alhambra, like so much great architecture, was a desperate effort to anchor a dying civilization). I was inhabiting. It was unforgettable.

Memory and place

Would I think the Alhambra was so great if I'd seen it in a more typical moment? The point of this essay is that it's impossible to know the answer. You can't separate your memory of a specific inhabitation from the objective place you inhabited. Memory and place are one. Neither really exists without the other. As the poet Yeats put it, "How can we know the dancer from the dance?"

All I know is I won't be going back. ■



CIRCLE 35 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Passion for Perfection

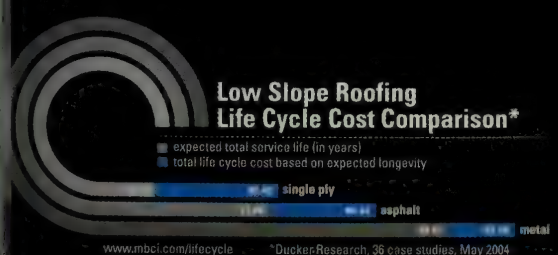


Your passion is design. Our passion is metal.
That's why we make and fully warrant
the world's finest metal roofing systems.

When you're designing your masterpiece,
spec a roof with the performance
that's suitable for your level of perfection.

MBCI makes metal easier. The rest is up to you.

Project: Lester E. Palmer Events Center, Austin, TX
Architects: Barnes Gromatzky Kosarek Architects, Austin, TX
Alan Y Taniguchi Architects & Associates, Austin, TX
Centerbrook Architects and Planners LLC, Centerbrook, CT
Roofing System: MBCI SuperLok®



www.mbci.com/lifecycle *Ducker Research, 36 case studies, May 2004

MBCI

www.mbci.com
MBCI locations to serve you

Houston, TX (877) 713-6224 • Adel, GA (888) 446-6224 • Atlanta, GA (877) 512-6224 • Atwater, CA (800) 829-9324
Dallas, TX (800) 653-6224 • Indianapolis, IN (800) 735-6224 • Lubbock, TX (800) 758-6224
Memphis, TN (800) 206-6224 • Oklahoma City, OK (800) 597-6224 • Omaha, NE (800) 458-6224
Phoenix, AZ (888) 533-6224 • Richmond, VA (800) 729-6224 • Rome, NY (800) 559-6224
Salt Lake City, UT (800) 874-2404 • San Antonio, TX (800) 598-6224 • Tampa, FL (800) 359-6224

CIRCLE 36 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Can you design a room without walls?











Now you can with the vanishing NanaWall.™

Finally, a way to define—and re-define—space by more than mere windows and walls. Combining the strength of an exterior wall with the airiness of a glass window, the NanaWall™ creates mind-opening possibilities as it effortlessly folds out of sight on its patented tracks and rollers.

Now, you can work with more than steel, glass, and concrete. You can control space in an entirely new way. NanaWall™ offers versatile, design-driven solutions for any large opening. When open, it creates wide-open spaces. When closed, it's secure and weather-tight. The independently-tested NanaWall™ is available in a full palette of colors, configurations, and finishes, including durable aluminum-clad wood. Now, you can create dynamic glass walls for any application, from store-fronts to pool enclosures to stadium luxury suites. It's entirely up to you.

You don't create boxes—so why think inside one?
Only NanaWall™ opens your designs as it opens your possibilities.

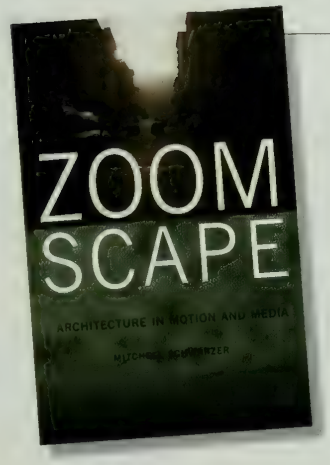
For more information call
888.411.NANA *(6262)*
or visit us on the web
www.nanawall.com

NanaWall
Bringing the Outdoors in

CIRCLE 37 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Summer reading: A sampling of architecture books

Books



Zoomscape: Architecture in Motion and Media, *by Mitchell Schwarzer. New York: Princeton Architectural Press, 2004, 320 pages, $29.95.*

For most of human history, buildings were static things to be touched or glimpsed the same way day after day. Today, they're something much different: atmosphere, metaphor, and landscape, shaped by whether you see them in a car or from the air, via photographs or in a film's flickering glow. How these changes infuse our perception of architecture is the subject of this insightful book by Mitchell Schwarzer, chair of visual studies at California College of the Arts, in San Francisco and Oakland, and a former planner for the city of San Francisco.

Schwarzer defines his topic as how "innovations in transportation and image reproduction have recast the perception and understanding of the building environment." This allows Schwarzer to explore everything from the way Le Corbusier used aerial photographs to advance his argument that "cities, with their misery, must be torn down," to the quickstep cityscapes that litter so many televised opening credits, and even the "film blanche" of *The Sound of Music*, where, Schwarzer writes, "architecture and landscape are used to deepen a drama of social disintegration."

While architecture's role in movies and other media has been surveyed before, Schwarzer goes much deeper in exploring the connections between how we see and what we see. In his world, the textural quality of a building, which was the true test for centuries on end, becomes less relevant than how it plays on the silver screen or in glossy magazines: "Architecture must merge into the flow of information, into the spectacle of media … energized in velocity or dazzling light and sound effects," he writes.

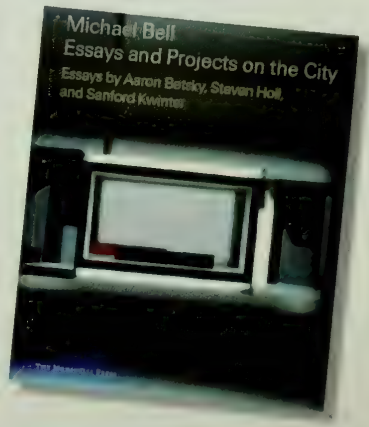
At times, Schwarzer burrows too deeply into his subject matter, quoting theorist after theorist and offering example after example rather than ranging out to explore, say, how the notion of architecture as imagery allows people to feel content with the wallpaperlike building facades that now bedeck our suburbs. That said, Schwarzer brings a needed jolt to the task of architectural criticism. He reminds us not only that buildings cannot be viewed in isolation—they're no longer inanimate objects, either. *John King.*

Space Replaces Us: Essays and Projects on the City, *by Michael Bell. New York: Monacelli Press, 2004, 192 pages, $55.*

Architect Michael Bell is preoccupied with issues concerning space and urbanism in the contemporary American metropolis. His book (its title taken from his competition entry in 1992 for a "house turned inside out," sponsored by the magazine *Japan Architect*) presents a series of projects ranging from exhibition installations to individual houses to larger architectural interventions in Houston and New York City. Also included are Bell's essays on Modernist and Postmodernist theories of space and their implications for his practice, along with brief appreciations of his work from Sanford Kwinter and Steven Holl.

The book is visually sumptuous, presenting numerous refined digital renderings of Bell's projects, most of which are apparently unbuilt. The architect's design talent is abundantly evident here, as is his knowledge of 20th-century theories of urbanism and representation. In essays such as "Eyes in the Heat," Bell seeks to relate Colin Rowe, Robert Slutzky, and Peter Eisenman's readings of Modernist art and architecture to the dispersion of metropolitan regions such as Houston and Los Angeles. Arguing that such generic conditions produce an "idealized subject discrete from local or actual context," Bell links the work of these theorists to European writings on the city by Rafael Moneo and Aldo Rossi, and suggests that, taken together, these five architect-critics can provide a new basis for the deployment of Modernist visual language in the contemporary city.

The implications of Bell's approach for urban design are demonstrated in projects such as "Stateless Housing," his proposal for the Arverne Urban Renewal area in Rockaway, Queens, New York, a once-thriving community that's now a desolate beachfront of public housing and vacant lots. Describing the project as "Not CIAM, Not New Urbanism," he envisions a series of triplex housing units that are raised off the ground to allow vegetation to flourish beneath them. The ideas he presents here invoke the spirit of the postwar Case Study House program in Southern California,



but despite their undeniable architectural sophistication, it's doubtful such projects will ever be built in this part of New York. Nevertheless, Bell's book shows a sustained and earnest effort to grapple with the thorny questions that emerge when talented architects attempt to make the leap from theory into practice in American urbanism. *Eric Mumford*

Books

Bruno Taut: Alpine Architektur/Alpine Architecture, *by Matthias Schirren. Munich: Prestel, 2004, 128 pages, $39.95.*



Alpine Architektur, Bruno Taut's utopian blueprint for a post–World War I world, was first published less than a decade after Wright's *Wasmuth Portfolio* and only three years before Le Corbusier's *Vers Une Architecture*. Yet its 30 plates have never been printed in large format until now. The bilingual Prestel edition makes this important Expressionist document readily available.

Besides his theoretical works, Taut is best remembered for the Britz Horseshoe Settlement in Berlin and for the Glass House at the 1914 Werkbund Exhibition in Cologne. We have only monochrome images of that kaleidoscopic crystalline gem, yet the Glass House turned out to be only a minor footnote compared to fellow Werkbund exhibitor Walter Gropius's iconic and hugely influential Model Factory.

Many European artists and intellectuals, horrified by the Great War, dreamed of employing architecture to rebuild society. But few approached the reordering of the universe with such moral and religious fervor, and with such a denial of ego (Taut planned to publish his drawings anonymously). In contrast to Modernist polemics espoused in, say, *De Stijl* or *L'Esprit Nouveau*, Taut leads us on a journey from Switzerland's Alps to the sky, the solar system, and into the Great Nothingness. The reader climbs steep valleys, past glass tempiettos and crystalline reworkings of the Hagia Sophia, and up into the clouds. Atmospheric and romantic are the operative terms here.

Taut's paradigm is composed like a Bruckner symphony, a heady potpourri with bits of William Blake, John Ruskin, Jules Verne, Richard Wagner, and Jesus. His drawings and watercolors depict mountains that are both Cubist and geological (having the "same geometric principles as the architectural orders," Taut writes). Delightful as the images are, Taut's artistic abilities fall far short of his beloved Ruskin, while his stage sets lack the power of Schinkel's operatic canvases.

The message of *Alpine Architektur* is that there exists an argument for a moral dimension in both the universe and art. This welcome reappearance of *Alpine Architektur* makes one wonder how Modernism might have turned out differently had Walter Gropius emigrated to Turkey and Taut gone to America to teach at Harvard.
William Morgan

Nothing Less Than Literal: Architecture After Minimalism, *by Mark Linder. Cambridge: The MIT Press, 2005, 282 pages, $27.20.*

We like to think of architecture as the mother of the arts, but seldom give much thought to how she gets along with her brood. As Mark Linder says in this appealingly original book, art critics such as Clement Greenberg and Michael Fried have dismissed any relationship between art and architecture. Linder, an associate professor in the school of architecture at Syracuse University, disagrees, and in his book he explores the role of archi-

METAL WALL PANELS
Light
Durable
See for yourself!
Call today to learn more about the benefits of using metal wall panels in construction or for information on the resources MCA has available for you.
Contact the Metal Construction Association at 847/375-4718 or visit www.metalconstruction.org/wallpanels
MCA Metal Construction Association
American Iron and Steel Institute
Participating Wall Panel Manufacturers and MCA members
ATAS International • Alcoa Architectural Products • CENTRIA • Copper Sales • Foam Enterprises • Metecno • Metl-Span
2003 MCA President's Award Winner, overall excellence category: Clover Park Technical College, Lakewood, WA. Manufacturers: ATAS and CENTRIA
CIRCLE 38 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

dema® Cladded Buildings Conquer All



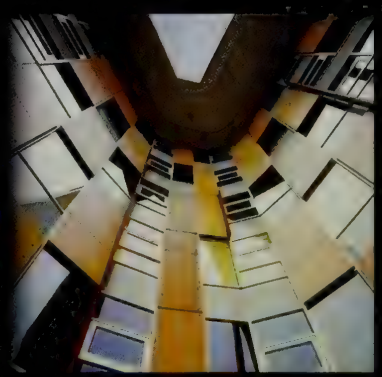
Even Time

ema is committed to the development of sustainable wood products that offer the beauty of natural wood wit
ralleled durability to withstand the test of time.

ding the design industry with wood laminate products for half a century:
rior Wall Cladding
Performance Flooring
rior Wall Cladding
ustical Panels
d Veneers

CIRCLE 39 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/









EMA NORTH AMERICA
e: 866 - 776 - 3362
05 - 572 - 1120
artexture@prodema.com

PRODEMA HEADQUARTERS
Tel.: (34) - 943 - 807 - 000
Fax: (34) - 943 - 807 - 130
E-mail: prodema@prodema.com

Prodema®
Made to last wooden Products

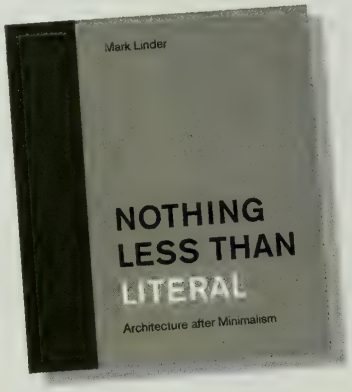
tecture in the criticism that emerged to both attack and defend the art movement known as Minimalism.

The book is divided into six chapters, each featuring a star figure in art, architecture, and/or criticism: Colin Rowe, Clement Greenberg, Michael Fried, Robert Smithson, John Hejduk, and Frank Gehry. Those making cameo appearances include Sigmund Freud, art historian/critics Rosalind Krauss and Leo Steinberg, the artist Donald Judd, philosopher Ludwig Wittgenstein, and architectural historian Henry-Russell Hitchcock.

Linder takes us back to Modernism's revitalization of architecture after the field's decline in "the age of romanticism," which he defines as occurring roughly between 1750 and 1850. Then he examines Modernism itself, quoting Greenberg's equation of Modernist painting with self-criticism, or "the tendency of Modernist art 'to turn around and question its own foundation,' " and also recalls Hitchcock's assertion, in his book *Modern Architecture*, published in 1929, that architecture had reascended to its position as the most primary of visual arts. Linder then traces how Modernist paintings relate to architecture's three dimensions, reminding us of Rowe's transformation of the physical truth of buildings experienced through time into a series of static pictures imagined by the observer. He also points out that Greenberg, at least at one point, considered functional architecture as a model for formalist art, saying that, like a machine, how art "looks" is what art "does."

The last two chapters examine the work of Hejduk and Gehry. The former provides a close analysis of many of the architect's projects, particularly the Wall House of 1968–70; and the latter focuses on Gehry's fascination with fish shapes, and on his studio for the painter Ronald Davis, completed in 1972.

There is no succinct conclusion; we have to consider Linder's ideas and think a bit for ourselves. But his ruminations do compel us to consider the connections between



Minimalism and architecture in a new light. *Stanley Abercrombie*

Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production, *by Dalibor Vesely. Cambridge: The MIT Press, 2004, 506 pages, $49.95.*

Dalibor Vesely, the director emeritus of graduate studies in the department of architecture at the University of Cambridge, England, thinks architecture has lost its way. Our present view of the field as "a discipline that can be treated as … a commodity," he says, comes from judging it as a technical pursuit, a mind-set with roots in the Baroque era, when science emerged as a distinct rival to culture (thus the "divided" reference in the title). In his new book, he sets out in search of architecture's humanistic foundations by exploring a range of erudite topics such as the formation of Renaissance perspective, the medieval philosophy of light, the NASA sky laboratory, and rapid changes of opinion about the Eiffel Tower. Though his arguments are sometimes unclear, Vesely elicits our sympathy for his goal of restoring architecture's communicative and creative roles. *S.A.*

The World's First...

Visit our website or order our full-color catalog to see all 31 of our power & data grommets and our other components.

PCS29

... Power and Data Grommet that sits on the desk! No holes, no clamps needed! Ideal for training tables, home offices, libraries. Flexibility and portability. Comes with one power outlet, one Cat. 5E data module. Black only. Size: 4 11/16" tall, 3 1/8" base.



"FINE ARCHITECTURAL HARDWARE FOR YOUR FINE FURNITURE"®

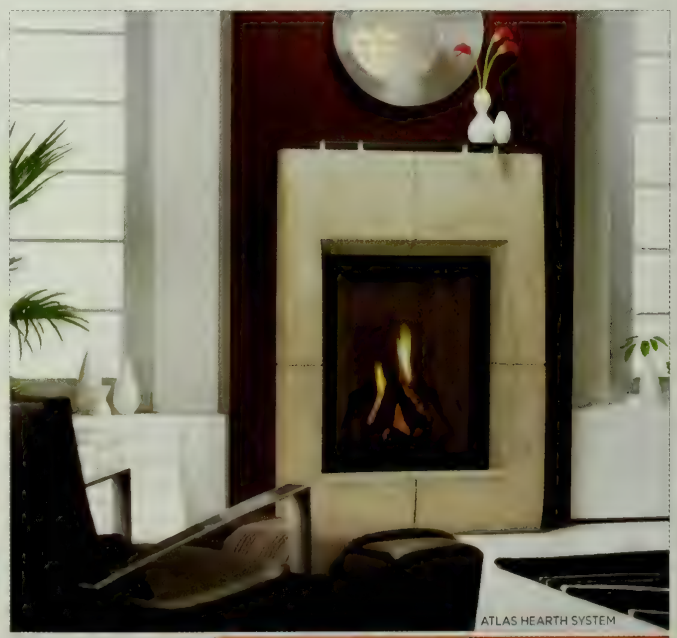
Doug Mockett & Company, Inc. • Manhattan Beach, CA • 800.523.1269

MOCKETT

DOUG MOCKETT & COMPANY, INC

www.mockett.com

CIRCLE 40 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



ATLAS HEARTH SYSTEM

HEAT&GLO

Where everything comes together

Where dreams unfold & ideas take shape

FIREPLACES & STOVES • MANTELS & SURROUNDS • DREAMS & IDEAS

HEATNGLO.COM • 888-427-3973

CIRCLE 41 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PAC-CLAD®
Petersen Aluminum

Metal Roofing Panels

Mandarin Oriental Hotel
Washington, DC
Architect: Brennan Beer Gorman Monk Architects
General Contractor: Armada Hoffler Construction
Roofing Contractor: Progressive Services, Inc.
Color: Hemlock Green
Profile: Redi-Roof Batten Panel

It's difficult to improve upon the view of the Washington Monument and other icons comprising the DC skyline, but the newest landmark, the Mandarin Oriental Hotel, adds a dramatic entry to the capitol at the 14th Street Bridge.

This nine-story hotel is topped with a striking mansard roof utilizing 20,000 sq. ft. of PAC-CLAD® Redi-Roof Batten panels finished in Hemlock Green. The Mandarin Oriental is part of The Portals, a mixed-use development that is the largest project in the history of Washington, DC. Brennan Beer Gorman Monk Architects designed the luxury hotel in the French style while reflecting the city's iconic neo-classic architecture. The nearly vertical roof installation was done by Progressive Services, Inc., of Dover, PA.

Panels are corrective-leveled during fabrication to provide superior panel flatness. Our PAC-CLAD® Kynar 500® finish, covered by a non-prorated 20 year warranty, is now available in 42 standard colors on steel and 37 standard colors on aluminum.

For more information regarding our complete line of metal roofing products, please call us at 1-800-PAC-CLAD or visit our website @ www.pac-clad.com.

Petersen Aluminum

1005 Tonne Road • Elk Grove Village, IL 60007
1-800-PAC-CLAD or 1-847-228-7150
Fax: 1-800-722-7150 or 1-847-956-7968

Other Plant Locations:
Annapolis Junction, MD: 1-800-344-1400
Tyler, TX: 1-800-441-8661; Kennesaw, GA: 1-800-272-4482
http://www.pac-clad.com

CIRCLE 42 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Sto Guard®

Introducing the Spray-On Building Wrap.



Dual Function: Waterproof and continuous air barrier assembly but NOT a vapor barrier, it is breathable

Superior: Waterproofing NOT "weatherization," water testing measured in days, NOT hours like most wraps

Ask about our 5 year warranty.

Seamless: Assembly covers full wall, joints and penetrations for use beneath exterior wall claddings including brick, wood, vinyl, cement siding, EIFS & stucco

Easy Application: It is water-based, so conventional spray equipment or paint rollers can be used

Pros in the know use Sto.

Call us with the specs on your next project at 888-410-0956 or go to www.stocorp.com/stoguarddp2 for testimonials or to locate the distributor nearest you.



sto

www.stocorp.com

CIRCLE 43 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Aichi Expo tries to merge green architecture with good architecture

Exhibitions

By Fred A. Bernstein

Expo 2005. *Aichi, Japan, through September 25, 2005.*

Robots—including an android jazz band sponsored by Toyota—dominated the media coverage of the 2005 World Exposition in Aichi, Japan. But the most surprising machines were the ones dispensing soda into paper cups. The back-to-the-future contraptions were part of an effort to emphasize the fair's environmental theme, "Nature's Wisdom." So were daunting clusters of trash pails—visitors were asked to sort their garbage into a dozen categories.

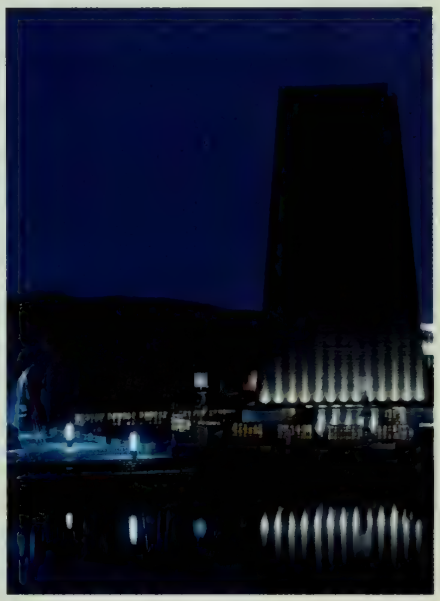
The fair—one of the twice-a-decade world exhibitions sanctioned by the Paris-based Bureau of International Expositions—runs through September 25 on a parklike site east of Nagoya, the industrial city between Tokyo and Osaka. The environmental theme pervades the fair's site-planning. The main transportation loop—a 2-mile-long boardwalk—was raised on stilts, ostensibly to leave the ground unaltered. Transportation options at the fair include fuel-cell-powered buses. As for architecture, each participating country was given a prefabricated, warehouse-style building, which will be recycled when the Expo closes. Some countries managed to turn prefab into pretty fabulous. Spain chose Foreign Office Architects (FOA) to hang a screen of ceramic hexagons around its building. Others, including Switzerland and Mexico, created compelling interiors that made the buildings' concrete walls recede. But overall, the chance to create bold architectural forms, a highlight of so many past world's fairs, was sacrificed to the (admirable) experiment in sustainability.

Fred A. Bernstein is a New York–based architecture and design journalist.

The Expo has attracted huge crowds: more than seven million visitors in its first twelve weeks. That's in part because superb public transportation makes it possible for many Japanese to day-trip to Aichi. (For those coming from far away, a new airport opened in March.) The last leg of the trip, from either the airport or downtown Nagoya, which is about 200 miles from Tokyo, is on a maglev train decorated by an American, Urso S.A. Chappell, the winner of a design competition.

Inside the fairgrounds, it's impossible to avoid being educated about alternative energy sources, green-building methods, and extreme recycling. All of which is surprising, given that the fair is meant to promote Aichi Prefecture, an industrial section of Japan that includes Toyota City, Japan's auto-industry-centered version of Detroit. Toyota's former chairman spearheaded the effort. The U.S. pavilion was organized by another former Toyota executive, who convinced companies like General Motors, DuPont, and ExxonMobil to provide support. (Federal law prevents public funds from being spent on international expositions.) Japan's industrial





Lithuanian pavilion (above), by Buciene Bucas & Ozarinskas. Japanese corporate pavilions (right). The park's elevated boardwalk entrance, with maglev trains (below).



heartland has been overlooked by tourists taking bullet trains between Tokyo and Kyoto, and the fair is meant to change that, while burnishing the image of Japan's large manufacturers.

The giant "global loop" is roughly an oval that feeds culs-de-sac called "global commons," each devoted to a region of the world. The U.S. pavilion, which was certain to attract attention, was placed, like the milk in the back of the supermarket, at the far end of the Americas section, past Canada, Mexico, and Cuba. The building itself is covered in red, white, and blue fabric, suggesting a large flag, with a LED screen displaying postcard views of the U.S. (Visitors seemed more interested in the Segways ridden by the greeters.) Inside, a multimedia show, in which Benjamin Franklin "pays a visit to" 2005, is entertaining. When Franklin goes out in a lightning storm, with his famous kite, the audience experiences high winds, heavy rain, and, even an electrical "shock." (The shock is created by sending "flat sound waves" through the seats, according to Chris Ellis of BRC Entertainment Arts of Burbank, California, which designed the attraction.) The show is also informative, except that the script avoids mentioning pollution, suggesting (conveniently) that nature will find its own solutions to environmental problems. The post-show gallery contains some stunning artifacts, including a replica of the Wright brothers' plane and the Mars Rover. Neither groundbreaking nor gutsy, the corporate-sponsored pavilion is nonetheless a satisfying visit.

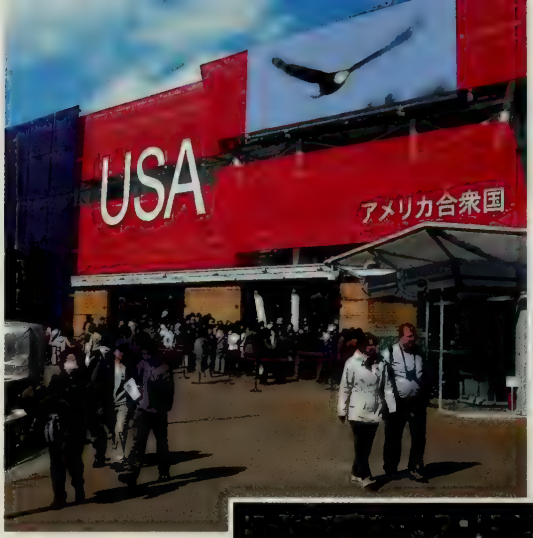
But the facade and interiors, by architect Bud Holloman of Jackson, Mississippi, are fairly rudimentary. Not so the second-floor VIP suite, designed by *Queer Eye for the Straight Guy* decorator Thom Filicia. The suite, where corporate sponsors can entertain clients, is a lush homage to American design, with the kind of pieces you might see in a Cooper-Hewitt National Design Triennial (tables by Connecticut's Poesis and objets by New York's Michele Oka Doner are among the standouts). Still, having a gorgeous VIP suite in an otherwise bland pavilion seems more than a bit undemocratic. Not only that, but the U.S. pavilion is, sadly, the only building at the fair where visitors must pass through a metal detector.

Among the other national pavilions, Romania scored with a series of mirrors that move in the wind (designed by Bucharest architect Dorin Stefan). At Spain's outpost, FOA went to town with the hexagonal tiles, their shape designed to "resonate with the Gothic and Islamic lattices and traceries of Spain," says partner Farshid Moussavi. FOA's corner detail, which requires the brightly colored hexagons to turn 90 degrees, is stunning. Inside, the firm created a series of rooms that merge the hexagonal theme with the suggestion of vaulting. Picture catacombs designed by Buckminster Fuller. The Swiss pavilion contains a walk-through evocation of the Alps, made entirely of photos printed on flat surfaces. It's an amazing optical illusion, created by the group Panorama 2000. The Nordic pavilion, designed by Denmark's Peter Bysted, has a terrific interior, in which pathways are defined by paper walls suggesting both high-tech ships' sails and icy coastlines. Austria managed to create a wall of ice in a heated room—visitors couldn't resist running their hands along it.

Corporations got to build somewhat flashier pavilions. Hitachi's sleek building, for instance, resembles a giant electronic device eroded by a waterfall—the man-made versus natural, with the natural (at least ostensibly) the winner. Predictably, the corporate pavilions have thus far drawn the largest crowds.

The emphasis on the environment seems a pointed critique of U.S. consumer culture. Still, critics have said that a world's fair, no matter how green it tries to be, requires vast resources to build and operate, and that people could have learned the same lessons from books and Web sites. In fact, the fair seems a noble effort to educate, a throwback to an era when crowds gathered to be enlightened, not just entertained. It will be interesting to see whether the next World Expo, planned for Shanghai in 2010, follows its lead. ■

THE EMPHASIS ON THE ENVIRONMENT SEEMS A POINTED CRITIQUE OF U.S. CONSUMER CULTURE.





The flag-clad U.S. pavilion exterior (above), and its contemporary-style VIP suite (right). The exterior of the Spain pavilion (below), by Foreign Office Architects, is clad in a plethora of hexagonal, multicolored tiles.



Introducing the Era® Collection



KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

www.kimlighting.com

Made in America

HUBBELL® Hubbell Lighting, Inc.



CIRCLE 44 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Vintage™ - Introducing a family of Steelscape TruZinc® Hot Dip Galvanized steel products for architectural applications which exhibit an as-manufactured aged appearance. Vintage™ I is intended for non-warranted applications where "natural aging" will occur after an initial period of time. Vintage™ II & III were developed for "higher-end" applications where a appearance warranty is required. Please contact a Steelscape representative for product information, availability and warranty details.
1.888.285.7717 www.steelscape.com

steelscape

Great people behind great ste

CIRCLE 45 ON READER SERVICE CARD
TO ARCHRECORD.CONSTRUCTION.COM/P

Modernism and hype fuel the condo boom in Miami

Correspondent's File

By Sara Hart

It's hot much of the time in South Florida. Now, however, the heat is constant and radiating from a real estate market that is on fire. Although the media report on it daily, their commentary seems to stress quantity over quality. Every story is larded with numbers: statistics, percentages, interest rates, dollars per square foot, heights, total units, and, of course, the number of months until the bubble bursts. With most of the drama generated by this numbers game, there's been very little talk of architectural design, unless a celebrity architect is attached to the project.

One could easily assume that much of the building is just frantic, uncontrolled, what-the-market-will-bear capitalism, fueled by low interest rates, lenient zoning, liberal financing, and a weak dollar that has attracted foreign investors to the flame in record numbers.

The heat has prompted some developers to make no small plans. French expatriate Leon Cohen, president of Maclee Development, has proposed a condominium tower and apartment-hotel tower complex in which each would rise 1,200 feet (110 stories) on a slim, 2-acre parcel along Biscayne Boulevard. If built, Empire World Towers (apparently named without intentional irony) will be the tallest residential building in the world, eclipsing the 21st Century Tower in Dubai by nearly 300 feet, and will cost around $1.1 billion. Engineering and code challenges notwithstanding, authorities are unlikely to permit such loftiness in the flight path of Miami International Airport.

Such audacity is not the norm there, however. Certainly, every project has a hook to distinguish it from the others—spa living, proximity to arts and culture, or an overabundance of services. Scratch beneath the hype, a few projects with broader objectives emerge from the smoke.

Standing tall

High-rises are so ubiquitous in Miami that it takes Cohen's twin towers to grab the public's attention. According to industry sources, there are more than 60,000 high-rise condo units in some stage of planning or construction in Miami alone. This number has the so-called vulture capitalists circling the construction sites, waiting for the fever to break.







Developer Craig Robins fused New Urbanism and Modernism at Aqua, enlisting the talents of 10 architects—Walter Chatham, Alison Spear, Alexander Gorlin, Brown and Demandt, Hariri and Hariri, Allan Shulman, Albaisa and Musumano, Suzanne Martinson, Emanuela Magnusson, and Duany Plater-Zyberk.

Local architect Chad Oppenheim believes predictions of doom are overblown. "It looks worse than it is. Not every project will be realized. Everybody wants to be a developer, but not everybody can assemble the right financing. The market will level out."

Oppenheim, who specializes in high-rise buildings, learned early on that sales, especially in Miami, can be driven by another factor besides location and price—innovative design. "We were a young firm which was hired by up-and-coming developers. Many of them did not own the prime, oceanfront properties. They had infill parcels or residual pieces of land, which were blocks from the beaches. Our goal was to create product that would draw buyers away from the waterfront," he explains. He did this by designing the kind of place where he would want to live. "When these apartments started selling at higher prices than the waterfront condos, other developers started to pay attention to what we were doing. We create lifestyle architecture to maximize the pleasure of living in Miami."

Oppenheim may have reached the pinnacle of lifestyle architecture at the lavish and hyperbolic Ten Museum Park, a 50-story tower in downtown Miami, which he designed in association with developer Gregg Covin. Scheduled to open next year, its goal is to reinvent the high-rise condominium as a tropical paradise—a challenge fueled by the presence of the Swiss spa Clinique La Prairie throughout the complex, creating a desire for private rooftop vitality pools and pavilions dedicated to every imaginable natural therapy.

OPPENHEIM LEARNED EARLY THAT SALES ARE DRIVEN BY ANOTHER FACTOR BESIDES LOCATION AND PRICE—INNOVATIVE DESIGN.

Oppenheim's brand of Modernism resists the invariability that often defines skyscrapers. After all, he's giving form to lifestyle, not maximizing square footage. Within the exoskeleton, his interlocking volumes create soaring spaces and frame dramatic views—a strategy that celebrates living up high.

Down to earth

Up isn't the only direction in Miami's exuberant building environment. A few developers have opted to explore alternatives to the isolated tower.

Craig Robins, founder and C.E.O. of Miami-based Dacra Development, affirms Oppenheim's claim that there is no bubble, yet. "Of course, the saturation of condos will cause a correction, but there is an enormous market for people who want to live here," says Robins. Then he adds an important distinction: "The good news about the boom is that it's forcing the urbanization of Miami."

Robins, the developer credited with rescuing South Beach's historic Art Deco district from death by neglect, has now captured another niche market and found a cause. He hopes to serve both at Aqua—a development that might be described as a neighborhood for buyers who want to live in Miami, not just visit it.

Located on Allison Island, Aqua is a stone's throw from the high-rise condominiums of Collins Avenue that loom over Miami Beach to the east; to the west are the single-family houses of the city of Miami.

Two things distinguish Aqua from most new construction. First of all, its buildings repose horizontally across 8.5 acres—three midrise condominiums and 50 zero-lot-line houses no higher than three stories.

Robins believed that he could challenge the dominance of the tower with an innovative approach to urban density. He hired Miami-based architects and urban planners Duany Plater-Zyberk (DPZ), cofounders of the Congress for the New Urbanism, to create a master plan that would fuse the principles of traditional urbanism with modern architecture. Then he assembled 10 cutting-edge architecture firms to design the town houses and apartment buildings. It was an experiment that took finesse and has been, by all accounts, a commercial success. More importantly, Robins has proved that the familiarity of a neighborhood, public spaces, and varieties of scale are compatible with market-driven development.

Across the water from Aqua in Miami Beach, near many of the area's arts and cultural organizations, the architecture firm Arquitectonica and the Wave Group are developing ArtéCity, a $100 million project for 180 residences on a city block in Miami Beach. This project bears some similarities to Aqua, mostly in terms of its horizontality and public amenities. Here, though, a single architect is pursuing a neutral vocabulary to highlight one of the project's most important contributions to the urban fabric—the restoration of the Art Deco Governor Hotel.

Architects and developers may be self-serving when they proclaim that nothing threatens to burst the bubble or that there is even a bubble, but that doesn't mean they're wrong. They'll only be wrong if they squander the opportunity to create and sustain a viable urban fabric. ■



Chad Oppenheim designed spa-themed "lifestyle residences" at Ten Museum Park.



Designed by Arquitectonica, ArtéCity will include condos, town villas, and shops.



When a design project reaches its final strokes, you don't want to end up with your back against the wall. That's why **savvy designers specify AWI Quality Certification** on custom architectural woodwork projects. AWI's internationally-recognized Quality Certification Program helps design professionals **verify the skills of woodwork providers, ensuring compliance** with the AWI Quality Standards during fabrication, finishing and installation when inspected.

Call **800-449-8811** or visit **awinet.org** to register your next architectural woodwork project.

And get an extra measure of assurance before you find yourself in a tight spot.

AWI ARCHITECTURAL WOODWORK INSTITUTE

1952 Isaac Newton Square West, Reston, VA 20190 telephone 703 733 0600 fax 703 733 0584 www.awinet.org

CIRCLE 46 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

At one of the most prestigious golf resorts in the world, choosing Sunbrella® was just par for the course.



Sunbrella® and GLEN RAVEN® are registered trademarks of Glen Raven, Inc. © Carolina Hotel, Pinehurst Resort, Village of Pinehurst, NC.



You don't build one of the most renowned hotels, at one of the most renowned golf resorts, without using the finest materials around. That's exactly why you'll find Sunbrella awning fabric at the Pinehurst Resort. Our solution-dyed acrylic fabric locks in the color, keeping it vibrant under all elements. Sunbrella fabric is woven, so it breathes and doesn't lock in the heat, keeping you cool in its shade. And since Sunbrella awning fabrics come in more than 125 styles and colors, you can bet we even have some exceptional greens. To find out more, contact your local awning dealer or Glen Raven Custom Fabrics, LLC, Glen Raven, NC 27217. Or visit our web site at www.sunbrella.com. Insist on Sunbrella, there is no substitute.

sunbrella

Awnings & Canopies • Patio & Deck Furniture • Boat Tops & Covers

CIRCLE 47 ON READER SERVICE CARD OR GO

Snapshot



By Beth Broome

A novel new approach to the ancient Prague Castle

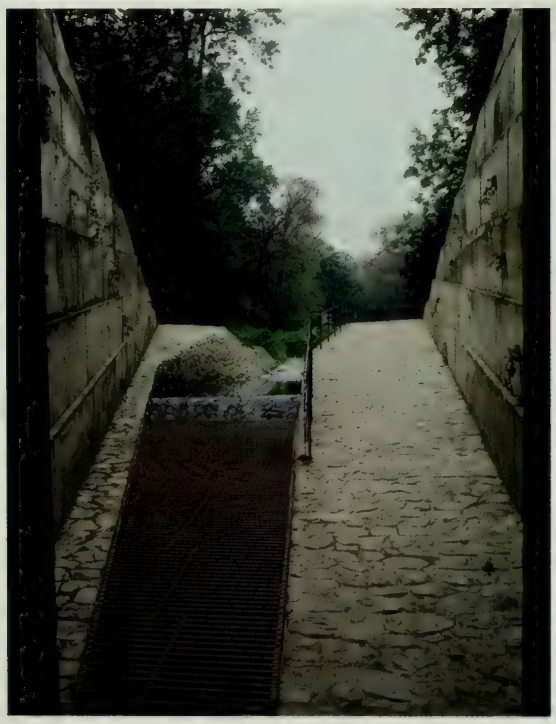
High on a hillside, the site of Prague Castle, which dates from around 880, is home to Saint Vitus Cathedral and a number of palaces, towers, monasteries, and galleries. Over the centuries, the castle has served as the seat for the head of state and the Prague bishop and has come to be known as the Czech Republic's historic and political center. Thanks to an initiative by former president Vaclav Havel, visitors who come to explore the castle and its extensive grounds can now approach the complex via a series of pedestrian pathways conceived by architect Josef Pleskot of the Czech firm AP Atelier.

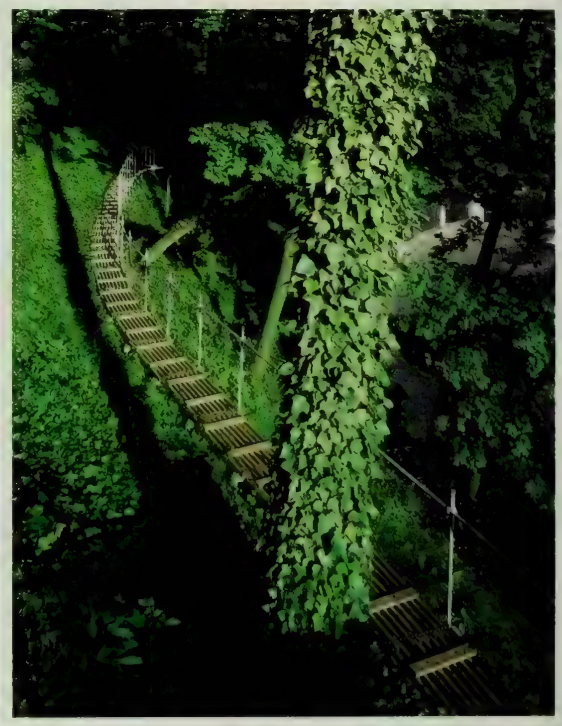


Originating at the bank of the River Vltava, the route continues over stone paths, steel footbridges, and timber walkways. Perhaps the most intriguing element of the journey is the Deer Moat Pedestrian Tunnel, which connects the upper and lower portions of this natural environment, passing through a









portion that was filled with earth after the moat became obsolete in the 18th century. In order to eliminate the claustrophobic feelings often associated with tunnels, Pleskot used a vertically oriented oval shape and incorporated ample illumination recessed into the floor that paints the walls with bands of light.

The vaulted passage, 230 feet in length, is constructed of self-supporting, hard-burned, fair-faced brick. Half of the floor length is made of precast fluted concrete, the other half of a steel grid that covers the Brusnice stream, which flows beneath. Sections of board-formed concrete walls serve as a transition between the rectangular entrances and the elliptical profile of the tunnel itself. Just beyond the entrances are cast-concrete retaining walls tinted with iron filings, which have been drilled to allow for drainage and to encourage the growth of vegetation. The same quarry stone that forms the stream bed paves the access points.

Pleskot's rugged pedestrian approach to the castle offers visitors a close encounter with this rare natural environment existing in the middle of a big city, and affords an off-the-beaten-path view of a major tourist attraction. The tunnel further enriches this overall experience, successfully incorporating a contemporary addition into a historic landscape. ■

The footpath leading up to the Prague Castle incorporates a variety of elements. Similarly, the pedestrian tunnel, which connects the upper and lower portions of the Deer Moat, is composed of a variety of materials such as brick, cast concrete, and quarry stone.

It is the energy within all of us

that is truly inexhaustible.



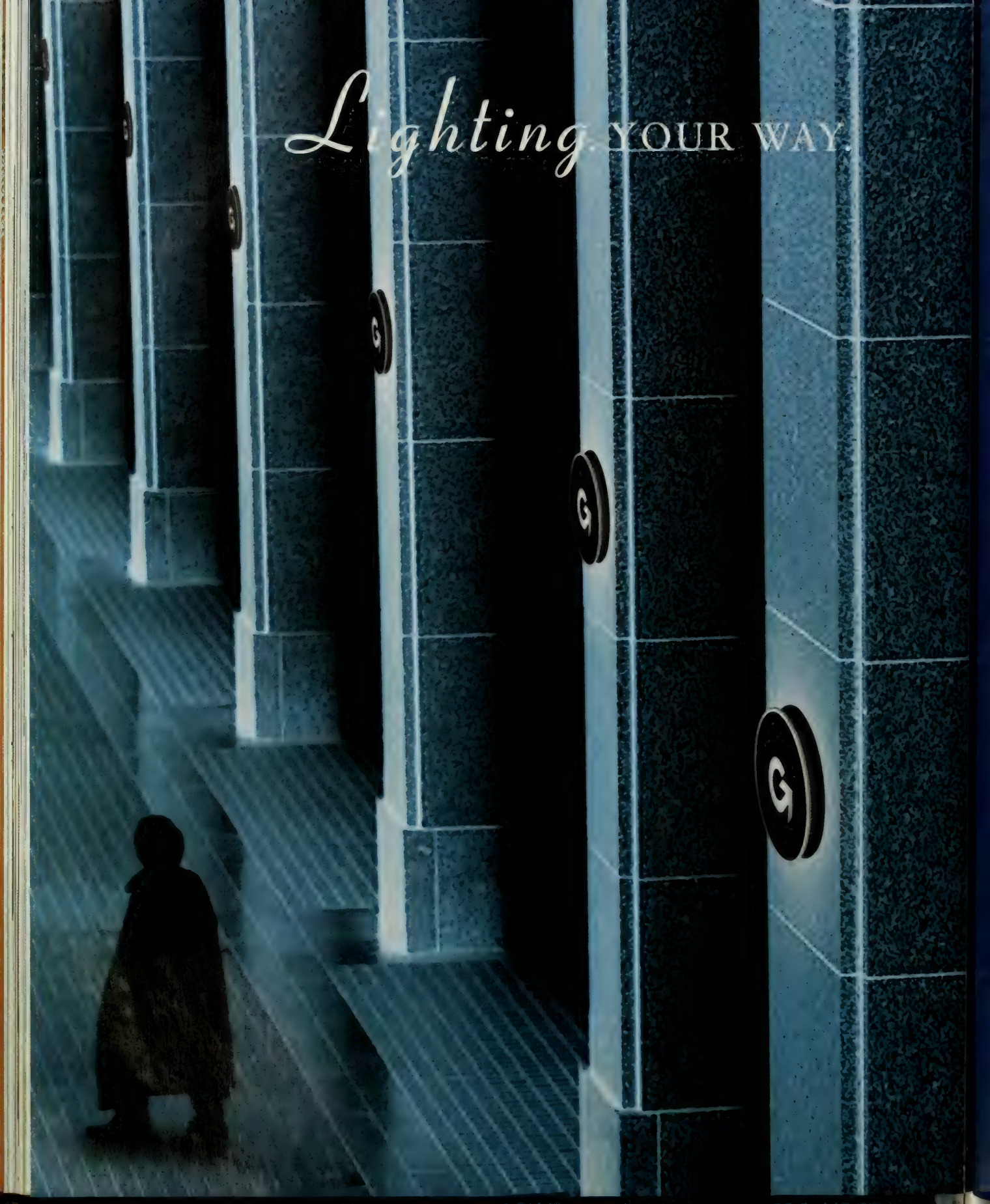
build for life

www.kawneer.com

architectural aluminum systems • entrances and framing • curtain walls • windows

Kawneer
An Alcoa Company

ALCOA


Lighting YOUR WAY.



Fascia Plates are part sconce, part architecture, part decoration, part identity system and completely unlike any lighting system ever invented. You can select from one of many standards or use your own imagination to create a custom Plate. Custom versions can range from your client's logo to your unique idea. Architectural, practical, decorative, illuminating, inspirational and endlessly versatile, Fascia Plates are among all else... Gardco.

GARDCO
LIGHTING
www.sitelighting.com

CIRCLE 48 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Big Firms Growing Bigger

By James S. Russell, AIA

Among the business peculiarities of architecture is its failure to obsess about size. Large projects don't generate as much interest as unique design solutions. But architecture can't ignore the growing scale and complexity of building-design practice. Even large firms aren't growth-obsessed like the rest of the business world, yet many firms double revenues and staff every few years. When staffing grows into the hundreds and you have to make a half-million-dollar payroll every week or two, you're not running a ruminative, cardboard-model-festooned atelier anymore.

To consider the implications of firms' growing size, RECORD has filtered the largest architecture and architecture-prime firms from the annual Top-500 design-firm list compiled by sister publication *Engineering News-Record*. (Find *ENR*'s complete listings at www.enr.com.) Then, we have selectively and utterly unscientifically sampled the views of big-firm principals and outside observers. In many ways, the challenges and opportunities facing large practices say a great deal about the future of all firms.

Staff of 250 is the new big

At the top of RECORD's list is HOK, a long-time large firm. Its 1,700 employees and 22 offices worldwide billed a whopping $331 million in 2004. Number two, Gensler, has 30 offices worldwide. Down the list, Zimmer Gunsul Frasca (number 20) employs 400. Not long ago, 100 persons was a big-firm threshold. In 2002, when AIA last surveyed large firms, it found 315 of them—employing just under 58,000 people, or just under 34 percent of all employees at U.S. architecture firms, according to Kermit Baker, AIA's chief economist. Bigness looks bigger today: The next survey will break out firms larger than 250.

Designers can see themselves as too iconoclastic to embrace the expediencies and compromises innate to large organizations. Why be big? Because a great number of clients want the advantages a large organization can offer. Speed is one. A company simply needs to get its new stores (or dozen new stores) open in a growing metro region faster than competitors. "In this town, every project needs to be finished yesterday," observed Kouhaila G. Hammer, the president and C.E.O. of Ghafari Associates (number 21), of Dearborn, Michigan. Her firm recently turned out a steel bid package in three weeks for an automaker's 600,000-square-foot facility.

The best smaller firms are fast and agile, too, but lose out to larger firms when speed and agility must be combined with deep capability. Capacity to serve a growing range and sheer quantity of client needs is what creates the true economic necessity for ever-growing firms. Large practices dominate complex building types requiring depth in specialized expertise: health care, laboratories, airports, sports facilities. Even large architectural firms must team up to execute big jobs of high complexity. HKS (number 5), HNTB (a 3,000-person, 60-office engineer-architect), and Corgan Associates (number 32) collaborated to build the 2.1-million-square-foot International Terminal D at the Dallas-Fort Worth Airport that opens this month. Actually, 54 architectural firms worked on the $1.7 billion project, which will be able to handle 37,000 daily passengers and includes a 298-room Hilton hotel.

Specialized and diverse

Bigness helps when clients need a depth of expertise in multiple specialties. Giant HOK can bring experienced teams to each type of a mixed-use project. That is one reason it can design an entire 7,000-student university for women in Dubai, United Arab Emirates; a town center in Maharashtra, India; and the new ballpark in Washington, D.C.

Technology and adroit firm collaborations can give smaller firms many big-firm advantages. Certain extraordinary capabilities remain largely outside the reach of smaller practices, however. HKS did a conceptual study for a 500,000-square-foot hospital in Washington, D.C., that could be transformed in the event of emergency into a 400-bed trauma center. EDAW (number 9) is best known for landscape architecture and urban design but also advises USDA on whaling traditions of the Inupiat tribe. Gensler extended its work in corporate interiors and graphics to strategic business planning and branding strategies, even creating an advertising campaign for a client. "We're able to stretch our skill sets," explains Gensler chairman

HOW LARGE FIRMS FACE CHALLENGES—RUNNING BILLION-DOLLAR PROJECTS • MANAGING FAR-FLUNG OFFICES • KEEPING DESIGN CULTURE ALIVE • COPING WITH GROWTH—IS REDEFINING THE PRACTICE OF ARCHITECTURE

M. Arthur Gensler, FAIA. "Design is a vehicle to solve problems, whatever they are, within the purview of the visual environment."

Specialized expertise helped many of today's big firms make their mark, but diversity—of markets, of office location, of expertise—is "a matter of survival," says Ghafari's Hammer. Her firm does three quarters of its work for the auto industry, but the firm is rapidly branching into airports and university work. Wimberly Allison Tong & Goo (number 23) remains a hospitality specialist, but it has broadened the spectrum of services it offers to its hotel and resort clients. Most large firms, however, are very broadly diversified.

Technology can extend a firm's reach globally, but having many offices can become a necessity. According to Scott Simpson, C.E.O. and president of The Stubbins Associates, headquartered in Cambridge, Massachusetts, "We have some of the top biomedical services in the world, but the clients want you on the west coast if they are doing projects there. You have to be geographically diverse."

Big deals: Terminal D, Dallas-Fort Worth Airport: $1.7 billion, 2.1 million square feet; university in Dubai: 7,000 students; 600,000-square-foot bid package, 3 weeks

Achieving a depth of expertise and a diversity of markets and locations morphs medium-size firms into large ones—if they can manage the transition. "With big investments in technology, marketing, and public-relations, and staff development prerequisites for success, a certain amount of critical mass is essential to maintain viability," explains Simpson. "At the same time, it takes years and lots of capital to grow a firm internally." To shortcut the process, Stubbins and Philadelphia-based Kling created an affiliation (not a merger per se). Kling is a leader in the highly specialized, technically demanding, and very busy niche of biotech and pharmaceutical-industry R&D facilities. The plan gave both firms two kinds of diversity: "Kling gained access to our offices in Cambridge and Las Vegas, our design portfolio and markets in hotel/hospitality, health care, and higher education," says Simpson. Stubbins gained access to Kling's specialized exerpertise and its offices in Philadelphia, Washington, D.C., and Raleigh/Durham. Though many functions remain separate, Kling-Stubbins can market itself as a diversified, 450-person firm.

Firms say they expand geographically not to achieve growth per se, but usually to serve existing clients. Nowadays, that growth is increasingly international. Many of the largest firms derive a third or more of revenues from international work, but most garner well under 10 percent. Leo A Daley is in nine or 10 foreign markets today, according to Charles Dalluge, president of Leo A Daly International (number 4). "We're proactive in 22." The biggest firms do a lot of work in the Middle East: Dubai, Abu Dhabi, the United Arab Emirates, for example. "The opportunities in China are unlimited," claims Arthur Gensler. India may be on the horizon, too: "A number of our developer and technology clients are building facilities in India and asked us to open an office there," adds Gensler. "But finding the right leadership and design talent and learning to do business in a new country is time-consuming and expensive." New international offices often don't pay off for firms, but as Gensler says, reflecting the views of other large firms, "If our clients say you've got to be in India, we'll go."

Clients, not projects

"Repeat business is number one," says Ralph Hawkins, the president and C.E.O. of Dallas-based HKS. "If the client wants a doghouse, we'll do it to retain a strong relationship." For large firms, repeat clients can represent 70 percent or more of billings, and several have had the same clients for two or three decades. There's a reason: It's a very expensive, long-term process to land a big project, so going from client to client in search of the next home run has become a form of business suicide. While many architects are project-focused, a key large-firm difference is the stress they place on client service. Building and maintaining relationships, and learning how to efficiently work with clients is cost-effective, keeping that steady stream of

HOW TO USE THE TABLE

Companies are ranked according to revenue for design services performed in 2004 in $ millions. Firms that responded to *Engineering News-Record*'s annual Top Design Firms survey submitted these revenue figures. For information on subsidiaries and where each firm worked outside the U.S., see the *ENR* Web site at www.enr.com.

Some markets may not add up to 100 percent due to the omission of "other" miscellaneous market categories, and rounding. The McGraw-Hill Companies publishes both ARCHITECTURAL RECORD and *ENR*.

Key to how firms classify themselves:
A = Architect **AE** = Architect-Engineer
P = Planner **AEC** = Architect-Engineer-Contractor

General building: Commercial buildings, offices, stores, educational facilities, government buildings, medical facilities, hotels, apartments, housing, etc.
Manufacturing: Auto, electronic assembly, textile plants, etc.
Transportation: Airports, bridges, marine facilities, railroads, etc.
Other includes: Industrial process facilities, power plants, telecommunications, hazardous-waste cleanup, sewage-treatment plants, etc.

2005 LARGEST ARCHITECT-LED FIRMS

	FIRMS LISTED BY 2004 REVENUES AS REPORTED BY *ENR* IN ITS TOP 500 DESIGN FIRMS SURVEY	FIRM TYPE	TOTAL REVENUE	INT'L REVENUE	GENERAL BUILDING	MANUF.	TRANSP.	OTHER
1	**HOK**, St. Louis, Mo.	AE	$331.9	$142.2	91	0	9	0
2	**GENSLER**, San Francisco, Calif.	A	$304.5	$35.8	93	0	7	0
3	**SKIDMORE, OWINGS & MERRILL LLP**, New York, N.Y.	AE	$190.0	$69.0	91	0	9	0
4	**LEO A DALY**, Omaha, Neb.	AE	$180.0	$1.8	100	0	0	0
5	**HKS INC.**, Dallas, Tex.	AE	$180.0	$10.6	100	0	0	0
6	**PERKINS+WILL**, Chicago, Ill.	A	$146.3	$13.9	99	0	1	0
7	**HEERY INTERNATIONAL**, Atlanta, Ga.	AE	$140.5	$25.2	95	1	4	0
8	**NBBJ**, Seattle, Wash.	A	$139.5	$32.1	100	0	0	0
9	**EDAW**, San Francisco, Calif.	AP	$137.5	$51.0	21	0	1	4
10	**RTKL ASSOCIATES INC.**, Baltimore, Md.	AE	$126.7	$40.3	96	0	0	4
11	**SMITHGROUP INC.**, Detroit, Mich.	AE	$115.6	$0.8	99	0	1	0
12	**A. EPSTEIN AND SONS INTERNATIONAL INC.**, Chicago, Ill.	AE	$107.0	$11.0	64	5	7	23
13	**THE BENHAM COS. LLC**, Oklahoma City, Okla.	AEC	$97.6	$1.6	48	13	9	29
14	**GRESHAM, SMITH AND PARTNERS**, Nashville, Tenn.	AE	$89.3	$0.3	53	1	28	11
15	**CANNON DESIGN**, Buffalo, N.Y.	AE	$84.7	$-	100	0	0	0
16	**KOHN PEDERSEN FOX ASSOCIATES PC**, New York, N.Y.	A	$81.0	$43.0	89	0	11	0
17	**CALLISON ARCHITECTURE INC.**, Seattle, Wash.	A	$77.2	$13.9	100	0	0	0
18	**HILLIER ARCHITECTURE**, Princeton, N.J.	A	$75.6	$3.0	100	0	0	0
19	**KLING**, Philadelphia, Pa.	AE	$74.0	$3.0	91	4	0	5
20	**ZIMMER GUNSUL FRASCA PARTNERSHIP**, Portland, Ore.	AP	$72.9	$1.7	96	0	4	0
21	**GHAFARI ASSOCIATES LLC**, Dearborn, Mich.	AE	$72.5	$0.5	5	94	1	0
22	**PERKINS EASTMAN**, New York, N.Y.	A	$70.1	$8.9	100	0	0	0
23	**WIMBERLY ALLISON TONG & GOO**, Honolulu, Hawaii	A	$69.9	$38.3	100	0	0	0
24	**ANSHEN+ALLEN ARCHITECTS**, San Francisco, Calif.	A	$68.8	$25.8	100	0	0	0
25	**DLR GROUP**, Omaha, Neb.	AE	$67.0	$-	100	0	0	0
26	**HAYES, SEAY, MATTERN & MATTERN INC.**, Roanoke, Va.	AE	$65.1	$0.6	48	4	8	39
27	**HAMMEL GREEN AND ABRAHAMSON INC.**, Minneapolis, Minn.	AE	$64.0	$-	100	0	0	0
28	**HARLEYELLIS**, Southfield, Mich.	AE	$58.7	$-	97	1	2	0
29	**HMC ARCHITECTS**, Ontario, Calif.	A	$57.5	$-	100	0	0	0
30	**SSOE INC.**, Toledo, Ohio	AE	$56.1	$0.1	34	26	3	37
31	**CUH2A**, Princeton, N.J.	AE	$54.0	$3.0	100	0	0	0
32	**CORGAN ASSOCIATES**, Dallas, Tex.	A	$53.2	$0.3	45	0	54	0
33	**FLAD & ASSOCIATES**, Madison, Wis.	AE	$52.1	$1.4	100	0	0	0
34	**HLW INTERNATIONAL**, New York, N.Y.	AE	$51.9	$4.2	100	0	0	0
35	**ELLERBE BECKET**, Minneapolis, Minn.	AEC	$51.0	$4.0	96	0	0	0
36	**KAPLAN/MCLAUGHLIN/DIAZ**, San Francisco, Calif.	A	$50.4	$4.5	100	0	0	0
37	**VERSAR INC.**, Springfield, Va.	AE	$50.0	$-	24	2	2	62
38	**EINHORN YAFFEE PRESCOTT ARCH. & ENG'G PC**, Albany, N.Y.	AE	$49.6	$5.7	100	0	0	0
39	**EWING COLE**, Philadelphia, Pa.	AE	$48.5	$-	86	0	0	14
40	**SASAKI ASSOCIATES INC.**, Watertown, Mass.	A	$48.0	$8.0	100	0	0	0
41	**L. ROBERT KIMBALL & ASSOCIATES INC.**, Ebensburg, Pa.	AE	$47.5	$-	34	0	22	32

work flowing in, glamorous or not. "Even if a client doesn't give us a contract to do a million things up front," explains Gensler's Diane J. Hoskins, AIA, "we can use that relationship to prove to them that we can handle whatever they need." Gensler has national contracts with 100 global accounts. "Those accounts don't have to spend six weeks negotiating contracts and fees each time," she adds.

That focus on keeping the client comfortable can create dilemmas for big firms invested in design excellence. For every award-winning law-firm interior, there may be a hundred discount drugstores where the main design question is what color to make the resilient-tile accents. The age-old notion of architecture as a public art does not seem to surface much in firms dedicated to keeping clients comfortable, and innovative designs or facilities that make a civic statement in a community are on few corporate radar screens. The portfolios of big firms are chock full of office parks that look like every other office park, and shopping malls or hospitals with tacked-on design flourishes cribbed from 10-year-old design magazines.

Zimmer Gunsul Frasca "seeks big projects where design is at the core of client expectations," as managing partner Robert Packard puts it. As head of AIA's Large-Firm Roundtable, he's heard a lot about the "service firm," and he's uncomfortable with it. "Service is what clients should expect from us, nothing less. It should go without saying. Then what they are getting from us is a focus on design, program, and place." From its base in Portland, Oregon, ZGF emphasizes its skill at fitting projects and communities, which, Packard added, allowed his firm to win four of five competitions it entered recently in China. A lot of big-firm clients don't readily speak the architects' language of design, innovation, or civic spirit, however. Leo A Daly's Larry Oltmanns, AIA, says, "What a [corporate-governing] board wants to hear is how the design works better and doesn't cost any more."

Design's troubling fit

Large firms can be defensive about the singular artist who defines architectural culture in the eyes of those outside the field. Architects are too preoccupied by style, several firm leaders argued; the profession doesn't give enough attention to projects that are thoughtful, appropriate, and responsive. The service-driven nature of large



Not every building is super complex, or shaped like a lug nut. That's why we offer scalable solutions to fit your specific construction or retrofit needs. A leader in systems integration and technology contracting, we have the dedicated system specialists to provide you with the flexibility, speed and responsiveness you demand. So even if you fall a little short of needing an army, we won't fall short meeting your needs. To find out more, call 1-800-972-8040, ext. 595.

JOHNSON CONTROLS

CONSTRUCTION | SERVICE | FACILITY MANAGEMENT | FIRE ALARM & SECURITY | TECHNOLOGY | SYSTEMS INTEGRATION | ENERGY

www.johnsoncontrols.com

CIRCLE 49 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

2005 LARGEST ARCHITECT-LED FIRMS (continued)

	FIRMS LISTED BY 2004 REVENUES AS REPORTED BY *ENR* IN ITS TOP 500 DESIGN FIRMS SURVEY	FIRM TYPE	TOTAL REVENUE	INT'L REVENUE	GENERAL BUILDING	MANUF.	TRANSP.	OTHER
42	**BURT HILL KOSAR RITTELMANN ASSOCIATES**, Butler, Pa.	AE	$45.0	$-	100	0	0	0
43	**MAGUIRE GROUP INC.**, Foxborough, Mass.	AEP	$44.9	$1.1	17	0	52	31
44	**MULVANNYG2 ARCHITECTURE**, Bellevue, Wash.	A	$44.3	$7.3	100	0	0	0
45	**POLSHEK PARTNERSHIP ARCHITECTS LLP**, New York, N.Y.	A	$42.1	$-	100	0	0	0
46	**FANNING/HOWEY ASSOCIATES INC.**, Celina, Ohio	AE	$41.6	$-	96	0	1	3
47	**SHW GROUP LLP**, Dallas, Tex.	AE	$41.4	$-	100	0	0	0
48	**LPA INC.**, Irvine, Calif.	A	$41.0	$-	100	0	0	0
49	**NTDSTICHLER ARCHITECTURE**, San Diego, Calif.	AE	$40.0	$-	100	0	0	0
50	**PAGESOUTHERLANDPAGE**, Houston, Tex.	AE	$40.0	$1.4	100	0	0	0
51	**SHEPLEY BULFINCH RICHARDSON AND ABBOTT**, Boston, Mass.	A	$39.7	$1.7	100	0	0	0
52	**CHONG PARTNERS ARCHITECTURE**, San Francisco, Calif.	A	$39.5	$0.5	100	0	0	0
53	**THOMPSON VENTULETT STAINBACK & ASSOCS.**, Atlanta, Ga.	A	$39.5	$1.7	100	0	0	0
54	**GOULD EVANS**, Kansas City, Mo.	A	$39.1	$0.6	100	0	0	0
55	**BSA LIFESTRUCTURES**, Indianapolis, Ind.	AE	$37.8	$-	100	0	0	0
56	**RSP ARCHITECTS**, Minneapolis, Minn.	A	$37.3	$0.4	100	0	0	0
57	**OWP/P**, Chicago, Ill.	AE	$37.2	$0.2	100	0	0	0
58	**PGAL**, Houston, Tex.	AE	$37.0	$-	56	0	44	0
59	**DURRANT**, Dubuque, Iowa	AE	$37.0	$3.0	100	0	0	0
60	**GREENBERG FARROW**, Atlanta, Ga.	AE	$36.0	$-	100	0	0	0
61	**SMALLWOOD REYNOLDS STEWART STEWART**, Atlanta, Ga.	A	$35.9	$6.8	100	0	0	0
62	**PERKOWITZ+RUTH ARCHITECTS**, Long Beach, Calif.	A	$35.0	$0.3	100	0	0	0
63	**JETER COOK & JEPSON ARCHITECTS INC.**, Hartford, Conn.	A	$33.8	$-	100	0	0	0
64	**SWANKE HAYDEN CONNELL ARCHITECTS**, New York, N.Y.	A	$33.1	$15.0	100	0	0	0
65	**FENTRESS BRADBURN ARCHITECTS**, Denver, Colo.	A	$32.8	$0.7	48	0	52	0
66	**RAFAEL VIÑOLY ARCHITECTS PC**, New York, N.Y.	A	$32.5	$2.5	98	0	0	2
67	**VOA ASSOCIATES INC.**, Chicago, Ill.	A	$32.2	$-	100	0	0	0
68	**PBK ARCHITECTS INC.**, Houston, Tex.	AE	$32.1	$-	100	0	0	0
69	**TAIT & ASSOCIATES INC.**, Santa Ana, Calif.	AE	$32.0	$-	47	12	6	34
70	**NILES BOLTON ASSOCIATES INC.**, Atlanta, Ga.	A	$31.7	$0.7	100	0	0	0
71	**URBITRAN GROUP**, New York, N.Y.	AE	$31.0	$-	32	0	68	0
72	**NADEL ARCHITECTS INC.**, Los Angeles, Calif.	A	$31.0	$0.1	100	0	0	0
73	**EDSA**, Fort Lauderdale, Fla.	O	$31.0	$17.0	100	0	0	0
74	**SCHENKELSHULTZ**, Fort Wayne, Ind.	A	$30.9	$0.7	91	0	9	0
75	**BELT COLLINS**, Honolulu, Hawaii	AE	$30.8	$20.6	85	0	5	10
76	**COOPER CARRY**, Atlanta, Ga.	A	$30.3	$-	100	0	0	0
77	**ELKUS MANFREDI ARCHITECTS**, Boston, Mass.	A	$29.5	$-	88	0	0	0
78	**TRO/THE RITCHIE ORGANIZATION**, Newton, Mass.	AE	$29.2	$1.9	100	0	0	0
79	**ARQUITECTONICA**, Miami, Fla.	A	$29.1	$11.0	99	0	1	0
80	**KARLSBERGER COS.**, Columbus, Ohio	A	$29.1	$-	100	0	0	0
81	**EI ASSOCIATES**, Cedar Knolls, N.J.	AE	$28.7	$-	63	16	0	21
82	**PRO2SERVE PROFESSIONAL PROJECT SVCS.**, Oak Ridge, Tenn.	AE	$28.6	$-	0	55	0	32
83	**MBH ARCHITECTS**, Alameda, Calif.	A	$28.6	$-	100	0	0	0
84	**CLARK-NEXSEN PC**, Norfolk, Va.	AE	$28.5	$1.0	73	0	18	9
85	**CUNINGHAM GROUP ARCHITECTURE PA**, Minneapolis, Minn.	A	$28.0	$2.8	100	0	0	0
86	**MARNELL CORRAO ASSOCIATES INC.**, Las Vegas, Nev.	A	$28.0	$-	100	0	0	0
87	**SOLOMON CORDWELL BUENZ & ASSOCIATES INC.**, Chicago, Ill.	A	$27.9	$-	100	0	0	0
88	**BEYER BLINDER BELLE ARCHITECTS & PLNRS.**, New York, N.Y.	A	$27.8	$-	85	0	5	0
89	**WALLACE ROBERTS & TODD LLC**, Philadelphia, Pa.	AP	$27.7	$0.2	45	0	0	0
90	**ALBERT KAHN ASSOCIATES INC.**, Detroit, Mich.	AE	$27.6	$0.3	56	43	0	1
91	**ODELL ASSOCIATES INC.**, Charlotte, N.C.	AE	$27.3	$0.2	94	0	6	0
92	**MORRIS ARCHITECTS**, Houston, Tex.	A	$27.3	$0.1	100	0	0	0
93	**LS3P ASSOCIATES LTD.**, Charleston, S.C.	A	$26.6	$-	100	0	0	0
94	**POGGEMEYER DESIGN GROUP INC.**, Bowling Green, Ohio	AE	$26.1	$-	15	6	27	34

firms and the necessity for collaboration among very large teams leads to what Hammer, of Ghafari, describes as her firm's "low-ego" culture. "It's about the client, not about us," adds Dalluge of Leo A Daley. The large-firm client pool is mostly leery of large firms built around a single designer, like Murphy/Jahn's Helmut Jahn. Most of Jahn's work is overseas.

Design, however, glues big-firm culture together even as the imperatives of bigness—the greater number of people and voices involved—make the commitment to design more difficult to maintain. "There's always a tension between the management side and the design side," explained Bill Helmuth, HOK's director of design. Big firms know that striving for design excellence motivates staff, keeping valued team members interested. Design differentiates firms, especially at a time when the diversity of a firm's work risks diluting its identity. Firms without a design profile find themselves competing on price—where margins are falling, some noted. "Design is the value-added side of the business," says Stubbins' Simpson. "If what you are doing is commodified, and you get two or three cents on the dollar, you have to drive profitability through volume." And then it's all downhill, adds Helmuth, noting that there is always someone ready to do the same work for less, a spiral that also tends to reduce quality.

Large firms nurture design culture in a variety of ways. Skidmore, Owings & Merrill (number 3) publishes a journal on its most intriguing work. Gensler brings in outside experts to judge its internal design competition. ZGF's Packard says his firm is exploring new ways to keep the advantages of a small firm alive in the big-firm/big-project environment. "It's important that every person, from the model shop to the partner, feel a level of attachment comparable to that of a project three or four people might work on."

Truly spectacular or exploratory design remains a rarity among the biggest firms, with the notable exception of Skidmore, Owings & Merrill. For many large firms, design is largely a question of attaching the style to the client, a faux-Gothic wrapping for one, a neo-Modern skin for the next, none of it executed with much conviction. Technical innovation is more common, but too rarely becomes an element of design expression.

Does the service culture of big firms mean that architecture's essential contribution to the culture is being lost? In serving clients largely



Work the way you think.

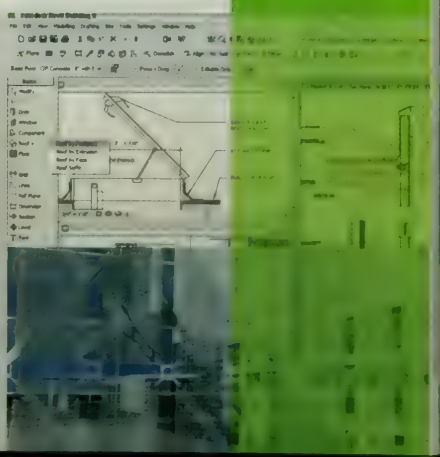
Autodesk

Idea:

Improve an architect's business by providing a more complete way to think about buildings, from design through construction.

Realized:

With Autodesk® Revit® Building software, design teams achieve superior documentation, more effective design coordination, and more productive collaboration. So clients are happier, you get more repeat business, and you're more profitable. Because it's created specifically for building information modeling, designing buildings and your work process with Revit Building can help you realize your ideas to compete and win. See how at autodesk.com/revitbuilding win. See how at autodesk.com/revitbuilding



Autodesk and Autodesk Revit are registered trademarks of Autodesk, Inc., in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. © 2005 Autodesk, Inc. All rights reserved.

2005 LARGEST ARCHITECT-LED FIRMS (continued)

	FIRMS LISTED BY 2004 REVENUES AS REPORTED BY *ENR* IN ITS TOP 500 DESIGN FIRMS SURVEY	FIRM TYPE	TOTAL REVENUE	INT'L REVENUE	GENERAL BUILDING	MANUF.	TRANSP.	OTHER
95	**BALLINGER**, Philadelphia, Pa.	AE	$26.0	$-	100	0	0	0
96	**H+L ARCHITECTURE**, Denver, Colo.	A	$25.5	$-	100	0	0	0
97	**CTA ARCHITECTS ENGINEERS**, Billings, Mont.	AE	$24.9	$0.1	92	0	0	8
98	**WARE MALCOMB**, Irvine, Calif.	A	$24.8	$-	92	8	0	0
99	**DEKKER/PERICH/SABATINI LTD.**, Albuquerque, N.M.	A	$24.8	$-	100	0	0	0
100	**BERMELLO AJAMIL AND PARTNERS INC.**, Miami, Fla.	AE	$24.3	$2.5	40	0	60	0
101	**MCG ARCHITECTURE**, Pasadena, Calif.	A	$24.0	$-	100	0	0	0
102	**STEFFIAN BRADLEY ARCHITECTS**, Boston, Mass.	A	$23.8	$7.5	100	0	0	0
103	**PAYETTE ASSOCIATES INC.**, Boston, Mass.	A	$23.7	$1.5	100	0	0	0
104	**WATKINS HAMILTON ROSS ARCHITECTS**, Houston, Tex.	A	$23.5	$-	22	0	0	78
105	**MCMAHON GROUP**, Neenah, Wis.	AE	$23.4	$-	24	0	9	67
106	**WIGHT & CO.**, Darien, Ill.	AE	$23.3	$-	79	0	9	13
107	**LIONAKIS BEAUMONT DESIGN GROUP INC.**, Sacramento, Calif.	AE	$23.0	$-	95	0	0	5
108	**JMA ARCHITECTURE STUDIOS**, Las Vegas, Nev.	A	$22.7	$-	100	0	0	0
109	**THE S/L/A/M COLLABORATIVE INC.**, Glastonbury, Conn.	AE	$22.4	$0.9	89	1	1	8
110	**ASTORINO**, Pittsburgh, Pa.	AE	$22.0	$-	100	0	0	0
111	**RNL DESIGN**, Denver, Colo.	AE	$22.0	$1.1	90	0	0	0
112	**HIGHLAND ASSOCIATES LTD.**, Clarks Summit, Pa.	AE	$21.9	$-	93	7	0	0
113	**EPPSTEIN UHEN ARCHITECTS INC.**, Milwaukee, Wis.	A	$21.9	$-	99	1	0	0
114	**TSOI/KOBUS & ASSOCIATES INC.**, Cambridge, Mass.	A	$21.8	$-	100	0	0	0
115	**FIELDS DEVERAUX ARCHS. & ENGINEERS**, Los Angeles, Calif.	AE	$21.7	$0.2	100	0	0	0
116	**USKH INC.**, Anchorage, Alaska	AE	$21.5	$-	49	0	37	14
117	**STEVENS & WILKINSON**, Atlanta, Ga.	AE	$21.3	$-	84	0	13	3
118	**RBB ARCHITECTS INC.**, Los Angeles, Calif.	A	$21.3	$-	100	0	0	0
119	**RDG PLANNING & DESIGN**, Des Moines, Iowa	AP	$21.2	$-	86	1	1	0
120	**BRPH COS. INC.**, Melbourne, Fla.	AE	$21.1	$-	100	0	0	0
121	**BSW INTERNATIONAL INC.**, Tulsa, Okla.	AE	$20.8	$-	100	0	0	0
122	**FLETCHER-THOMPSON INC.**, Shelton, Conn.	AE	$20.8	$-	98	0	0	0
123	**WDG ARCHITECTURE PLLC**, Washington, D.C.	A	$20.7	$-	100	0	0	0
124	**OPUS GROUP**, Minnetonka, Minn.	AE	$20.7	$-	100	0	0	0
125	**SMMA/SYMMES MAINI & MCKEE ASSOCS.**, Cambridge, Mass.	AE	$20.6	$-	98	2	0	0
126	**KKE ARCHITECTS INC.**, Minneapolis, Minn.	A	$20.5	$-	100	0	0	0
127	**GRUZEN SAMTON ARCH. PLNRS. & INT. DESRS.**, New York, N.Y.	A	$20.4	$0.2	90	0	10	0
128	**FKP ARCHITECTS INC.**, Houston, Tex.	A	$20.1	$-	100	0	0	0
129	**JOHNSON FAIN, A CALIFORNIA CORP.**, Los Angeles, Calif.	A	$20.1	$0.2	100	0	0	0
130	**LOONEY RICKS KISS ARCHITECTS INC.**, Memphis, Tenn.	A	$20.1	$-	100	0	0	0
131	**TMP ASSOCIATES INC.**, Bloomfield Hills, Mich.	AE	$20.1	$-	100	0	0	0
132	**DAVIS BRODY BOND LLP**, New York, N.Y.	A	$20.0	$2.4	100	0	0	0
133	**STUDIOS ARCHITECTURE**, San Francisco, Calif.	A	$19.9	$0.2	100	0	0	0
134	**PEI COBB FREED & PARTNERS ARCHITECTS**, New York, N.Y.	A	$19.8	$4.6	100	0	0	0
135	**GPD GROUP**, Akron, Ohio	AE	$19.7	$-	40	0	22	35
136	**URBAHN ARCHITECTS**, New York, N.Y.	A	$19.6	$1.2	69	0	26	0
137	**PAUL STEELMAN DESIGN GROUP**, Las Vegas, Nev.	A	$19.4	$4.0	100	0	0	0
138	**WESTLAKE REED LESKOSKY**, Cleveland, Ohio	AE	$19.3	$-	100	0	0	0
139	**KIRKSEY**, Houston, Tex.	A	$19.1	$-	69	0	0	11
140	**COCHRAN STEPHENSON & DONKERVOET INC.**, Baltimore, Md.	A	$18.9	$-	100	0	0	0
141	**FRCH DESIGN WORLDWIDE**, Cincinnati, Ohio	AP	$18.9	$2.5	100	0	0	0
142	**LANGDON WILSON ARCH. PLNG. INT'RS**, Los Angeles, Calif.	A	$18.7	$4.9	100	0	0	0
143	**LEE, BURKHART, LIU INC.**, Marina del Rey, Calif.	A	$18.3	$-	100	0	0	0
144	**GLATTING JACKSON KERCHER ANGLIN LOPEZ RINEHART**, Orlando, Fla.	AP	$18.0	$1.4	80	0	20	0
145	**TSP**, Sioux Falls, S.D.	AEC	$17.9	$-	96	0	4	0

in terms those clients define, does architecture become only the skillful organizing of a building program and its timely delivery? Can it add meaning? Can architectural amenity enhance ordinary activities? Can a standard commercial building program be made a civic ornament? This is a leadership dilemma that few large practices face head-on.

How big is big enough?

On the other hand, growth—what it means, how to do it—is a question that vexes big firms. Size may matter more than ever as architects try to carve out a viable position within an evolving project-delivery marketplace, dominated by massive engineering-led or contractor-led organizations that have bitten off services architects could offer, like master planning, strategic planning, and program management. Design-build is of special concern because of the way it can sever the architect's direct relationship with the client.

Right now HOK is only 28th on *ENR*'s Top 500 Design Firms list. Its revenues are about one-eighth those of engineering/architect/contractor giant URS, which had revenues of almost $2.85 billion on 2004. "Fundamentally, the large architectural firms are never going to play in the same field as the large engineering firms," says Ed Friedrichs, who once headed Gensler and now is a consultant. Gary J. Tulacz, who compiled and reported on *ENR*'s data, describes large engineering-firm cultures as much more growth-driven, which has to do with the size and complexity of certain projects (water, highways, massive refineries). "A lot of clients simply look to large firms for a sense of security. You don't want to be left high and dry on a big power plant because one firm goes under." Does that mean acquisition of the largest AEs by even larger engineer-led firms? "We hear it day in and day out," says HOK's Hellmuth. "We've been approached by a lot of people," says Friedrichs of Gensler. They're saying no—for now. ■

To participate in *ENR*'s next design-firm survey, contact Virgilio Mendoza at 212/904-6371 (virgilio_mendoza@mcgraw-hill.com).

ENR also publishes sourcebooks that further detail and breakdown its survey information. For more information, go to **www.enr.com/people/sourcebooks/top500Design/default.asp**.

SAVES MONEY, TIME – AND THE DAY.

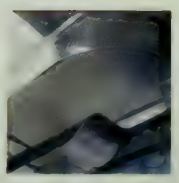


THE KNAUF KOOLDUCT® SYSTEM SIMPLIFIES EVEN THE MOST DIFFICULT DUCTWORK CHALLENGES.

Introducing the Knauf KoolDuct system – the phenolic foam-based, pre-insulated duct system that provides an energy-efficient, space-saving, total low-cost solution for the commercial and industrial markets. The KoolDuct system provides superior thermal performance with airtight efficiency, exceeding SMACNA (Class 6) air leakage requirements. Its sealed, aluminum-faced airstream surface is ideally suited for high specification applications. And the Knauf KoolDuct system's lightweight design helps cut installation time in half.

Stay on time and on budget with Knauf KoolDuct, a proven system that has performed in high-profile projects worldwide. For more information contact Knauf at 1-800-825-4434 ext. 8283 or visit our Web site at www.KnaufUSA.com.





KNAUF

"This is my insulation."®

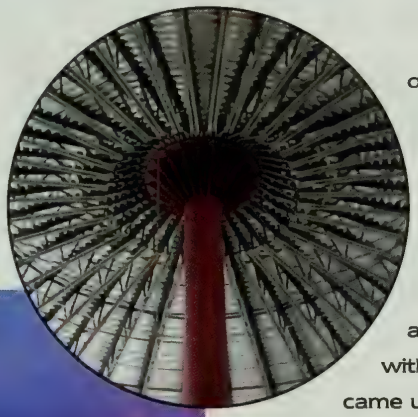
© 2005 Knauf Insulation GmbH.

CIRCLE 50 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Tampa Prep students can learn a lot about problem solving by studying the school's new dome







Tampa Preparatory School's dream of a geodesic dome for one of its new buildings ran into a problem. The project was cost prohibitive. But problems can lead to opportunities in the hands of talented, dedicated people. So rather than giving up on the idea of a dome, the architect and structural engineer partnered with design engineers from Vulcraft and came up with a solution that's beautiful, highly functional and within budget.

The spectacular dome they created is constructed of arched steel joists and deck that fan out from a center support column. And because of the ultra-precise design, manufacturing and installation of the joists, ceiling panels were able to be cut in advance and simply set in place on top of the bottom chord angles. Attention to detail like that is a sure way to hold down costs. It improves functionality too, because the air space between the panels and the roof decking provides plenty of room for ductwork, wiring and easy accessibility.

The Tampa Prep dome is one of many examples of Vulcraft's desire and ability to do more than manufacture steel joists and deck. We're ready at a moment's notice to partner with architects and engineers in creating successful solutions in design and construction.

So when you're ready for your next project, contact any of our seven plants across the country and let us in on your plans. We'll do our homework and come up with the answers you're looking for.

NUCOR

VULCRAFT GROUP

www.vulcraft.com

Brigham City, UT
435 734-9433

Chemung, NY
(Vulcraft of
New York, Inc.)
607 529-9000

Florence, SC
843 662-0381

Fort Payne, AL
256 845-2460

Grapeland, TX
936 687-4665

Norfolk, NE
402 644-8500

St. Joe, IN
260 337-1800

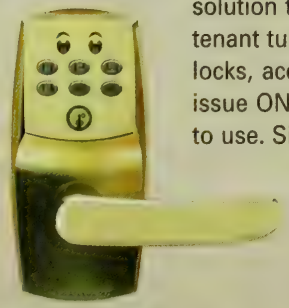
Tampa Preparatory School
ARCHITECT: Curts Gaines Hall
STRUCTURAL ENGINEER: Wilson Structural Consultants
GENERAL CONTRACTOR: J.O. DeLotto & Sons, Inc.
STEEL FABRICATOR: Fabricated Products of Tampa, Inc.
STEEL ERECTOR: Jimison Steel Service, Inc.

CIRCLE 51 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

NEVER REKEY OR REPLACE A LOCK AGAIN.



SCHLAGE INTRODUCES THE REVOLUTIONARY SCHLAGE E-BOLT KEY MANAGEMENT SYSTEM. The Schlage E-Bolt Key Management System is a new, innovative solution that saves you time and money by eliminating the need to rekey or replace locks due to tenant turnover or lost or stolen keys. The E-Bolt system allows you to reprogram the intelligent locks, accept a new key and eliminate access from old keys within minutes. You only need to issue ONE E-Bolt intelligent key to your residents to access all of the doors they are authorized to use. Since E-Bolt locks don't use pins, they are completely pickproof.



The Schlage E-Bolt Deadbolt is designed for resident doors or any door where a Grade 2 deadbolt is the correct application. The new Schlage E-Bolt Cobra Entry Lock (available in cylindrical or mortise) is a Grade 1 lockset designed for high-usage common areas such as perimeter and office doors. Both locks are retrofittable to any door.

The E-Bolt locks are electronically controlled by LockLink™ Express Key Management Software, which allows you to manage doors, keys and users—controlling who can go where and when. An audit of each E-Bolt lock can then be downloaded to a property manager's computer.

To find out more and to receive a comprehensive CD with videos demonstrating how the E-Bolt system can manage your property for life, call 1-800-540-7951 or visit our Web site at *SchlageE-Bolt.com*.

© 2005 Ingersoll-Rand

SCHLAGE®

e-bolt

IR Security & Safety
Proven Source. Proven Solutions.™
An IR Ingersoll-Rand business

Locknetics On Board

CIRCLE 52 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Two by Two

By Robert Ivy, FAIA



p. 88 *Walker Art Center*



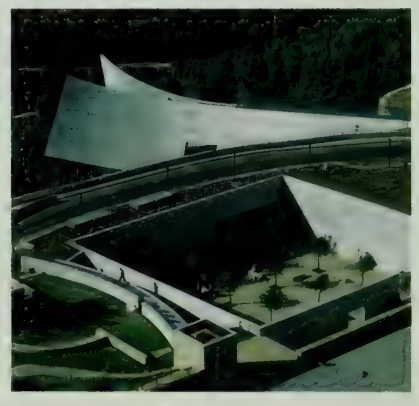
p. 100 *Casa da Musica*

Rarely do we have the opportunity to visit twin architectural projects side by side: Real life seldom affords the luxury. This month, ARCHITECTURAL RECORD provides a unique medium to compare apparent twins—two sets of projects, paired for this issue only. Four similar works, two related by appearance, two by scope, line up herein for scrutiny, allowing speculation and analysis of form, materials, and even their individual raisons d'être.

The first relationship, a visual one, jumps from the page. Herzog & de Meuron's addition to the Walker Art Center in Minneapolis, and Rem Koolhaas/OMA's Casa da Musica in Porto, Portugal, seem cut from the same geometric cloth. With blurred vision, the two projects meld into a seamless presentation, prompting questions of definition. Where does one end and its neighbor begin?

On closer analysis, we see that both architects placed major cultural institutions in urban settings, poising a museum addition (the Walker) and a symphonic performance space (Casa da Musica) within their respective geographies and cultures with architectonic clarity. Each employs a starkly angular, trapezoidal geometry to define and enfold spatial experience. Their apparent similarities mask more subtle distinctions.

Each architect resolves the very different solutions through plan, section, material, and notably, ornament. Whereas Herzog & de Meuron explore transparency and applied, exaggerated flourishes as a kind of semiotic language, literally wrapping the container with an ironic and literal flourish, Koolhaas and company provide a fresh essay on the presence and mutability of space, signaled through another era's vivid color and materials.

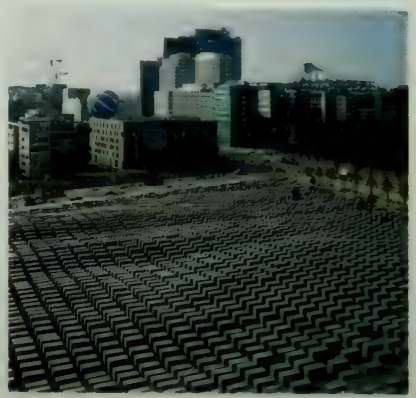


p. 112 *Yad Vashem*

No such immediate similarities link this issue's second architectural pairing, but the reasons for inclusion are just as strong. Contrast, not analogy, offers the most helpful analytical tool for their examination. While Yad Vashem in Jerusalem, designed by Moshe Safdie, and the Memorial to the Murdered Jews of Europe in Berlin, by Peter Eisenman, both memorialize the Holocaust, each approaches the problem in different ways.

Both engage topography, leading visitors through a variety of kinesthetic and sensory experiences. In Berlin's case, the abstracted, sculptural field gains power through repetition and number, its subliminal language expressed through hundreds of steles, flung at the heart of Berlin like an unspoken indictment. In Jerusalem, the architect directly incised a sculptural form like a gash into a hillside, providing a partially buried setting for reflection and remembrance. Neither looks like the other.

In all four cases, form and materials constitute the means to enriching larger cultural settings, each speaking silently to visitors as clearly as if in a known, civilized language.



p. 120 *Memorial to the Murdered Jews of Europe*

The architects extended the existing building uphill alongside Hennepin Avenue, a major traffic artery (this page and opposite, top). The expansion consists of four boxlike volumes that play against the city's downtown skyline (opposite, bottom).



Herzog & de Meuron expand Minneapolis's WALKER ART CENTER with quirky new volumes spun from the original building's tight spiral

By Sarah Amelar

With chunky massing and silvery, lightly crumpled aluminum cladding, Herzog & de Meuron's Walker Art Center expansion hovers over the sidewalk: a striking counterpoint to its adjoining neighbor, the center's original, decisively grounded, brick-clad structure, by Edward Larrabee Barnes. On its own, the 1971 Barnes building offered little space for public mingling outside its tranquil succession of pure, white, rectilinear galleries stepping up in a spiral. With few windows and a solidly opaque exterior, it remained architecturally quiet and self-contained. Yet as an institution, the Walker evolved into an exceptionally animated place, known for its risk-taking and discoveries of new talent. In 1988, the museum first pushed outward, creating a sculpture garden on its own grounds. But now, with Herzog & de Meuron's recent $70 million expansion—doubling the total interior space from 130,000 to 260,000 square feet—the container has begun to uncoil its tight spiral.

As if tossed out by centripetal force, a series of four skewed, box-like structures, embedded in a broad glassy passageway, now extend up the hill from the Barnes building. The series culminates in the tallest volume—the bulky block of ice—rising five stories and housing the art center's new theater, restaurant, and event space.

"We knew we wanted to end up with one building—not two parts," recalls Walker director Kathy Halbreich. "But it was essential for us to engage a practice that would respect the Barnes without being cowed by it." Instead of mirroring, engulfing, or grafting onto the original building, the Herzog & de Meuron scheme offers the new and the old as an almost casually strewn collection of eclectic yet related objects (all connected by the glass passageway). In spinning off from the Barnes building, the new volumes take the original notions of geometry and surface into a whole other realm.

Now allusions to crystal and lace (as well as other fabric) run through the extension, starting with the five-story component—faceted and trapezoidal like a huge ice cube—and the crumpled aluminum mesh that wraps it. Though akin to the existing structure in scale and proportion, the theater box literally bulges from the orthogonal, playfully distorting its cubic form. Two quirky, extra-large polygonal windows—with tilted shapes implicitly resulting from the volumetric distortion—punctuate this bulky yet gravity-defying volume, aloft on a 50-foot-long cantilever.

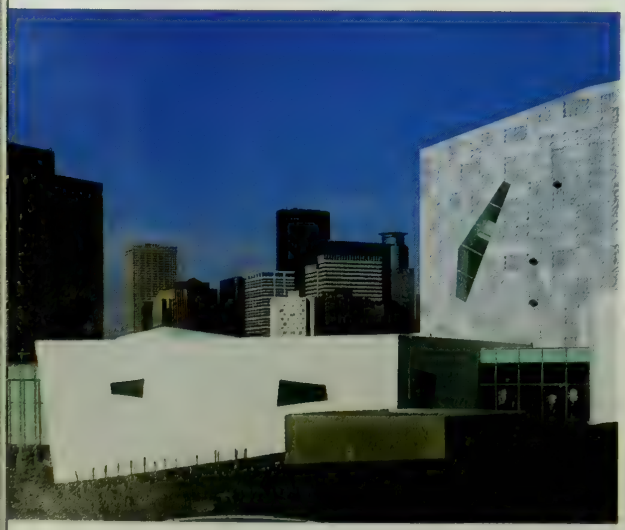
Galleries occupy two of the other new boxes, and the loading dock a third one. Lounges, lobbies, and circulation areas with views to a traffic artery and the downtown skyline fill the surrounding glass-enclosed spaces.





Project: *Walker Art Center Expansion, Minneapolis*
Architect: *Herzog & de Meuron—Jacques Herzog and Pierre de Meuron, principals; Christine Binswanger, partner in charge; Thomas Gluck, project manager; Nandini Bagchee, Carlos Bautista, Andrzej Egli, Raphael Forny, Nahyun Hwang, Adrian Kast, Martin Krapp, Rebecca Lowry, Florian Marti, Roberto de Oliveira, Peter Sigrist, Charles Stone, Mathis Tinner, Thomas de Vries, project team*
Architect and engineer of record: *Hammel, Green and Abrahamson—Dan Avchen, partner*





An expanded aluminum mesh that changes appearance with the light (this spread) clads the largest new volume, which houses a restaurant, theater, and event space.



1. *Existing Barnes building*
2. *Herzog & de Meuron addition*
3. *Sculpture garden*

Grass circles, surfacing amid pavers like stepping stones in a stream, lead to the entrance along Hennepin Avenue. The theater/restaurant volume, with the museum shop at its base, cantilevers 50 feet over the sidewalk (this page).

As if the architects had extended the Barnes cladding and rolled it out as carpeting, a runner of brick leads the way through the broad public corridors. Here, mobiles evoking crystal chandeliers drip with chunks of broken glass, and small, prismatic vestibules—with lace-patterned air-intake grilles—lead into the new exhibition spaces. Yet the interiors of these galleries deliver the real surprise: the shock of the old. All-white walls, terrazzo floors, and ceilings ribbed with beams invoke déjà vu all over again. Suddenly you're not quite sure where you are: in the existing building or not?

By giving the new galleries an uncanny resemblance to the original ones, Herzog & de Meuron further mix the additions into the eclectic melange of parts. Distinctions between the museum's recent and earlier sections become simultaneously blurred and accentuated. Parallel steel beams over the new exhibition spaces echo the rhythms of the original galleries' concrete ceilings, and the architects even amplified the Barnes spiral by turning its administrative offices into yet another gallery, taller than the originals but otherwise a dead ringer for them. "The thinking was: Why reinvent the typology when Barnes's white-cube galleries already functioned so well for art?" recalls Herzog & de Meuron project manager Thomas Gluck.



EXIT





A runner of brick, like the original exterior cladding, leads through the public circulation zone, defining an interior streetscape around gallery "boxes," finished in polished plaster (this page and opposite). Lacy air-intake grilles line prismatic vestibules outside the galleries (left two).



But ironically, the Barnes version of exhibition spaces was more open than the new one. Though the tight spiral is undeniably introverted, it actually opens up within itself, animating its galleries with expansively oblique views into one another vertically and horizontally. The spin-offs, by contrast, comprise much more enclosed and discrete boxes (although those very characteristics may make them easier places to mount shows).

The small prismatic vestibules leading from the public spaces, bedecked with crystals and lace, seem necessary as recompression (or decompression) chambers to mediate between the dual realms of public circulation and the more formal galleries that provide a neutral backdrop for the art. "In some museums—as in MoMA [RECORD, January 2005, page 94] or Barnes's building here—white neutrality continues all the way through, whether it's a space for exhibiting art or for something more social," says Herzog & de Meuron partner Christine Binswanger. "But we were interested in a specificity that would relate to different functions: extra-white for the art galleries, extra-theatrical for the theater, and a non-museum ambience—something more human, eccentric, and comfortable, like a town square—for circulation and gathering."

Breaking with the museum canon, the new nongallery spaces reveal a curious attitude toward the ornate. The swirling paisley that weaves through these areas recalls a lacy edge of lingerie coquettishly emerging along a plunging neckline and the sensual folds of a skirt. As the textile pattern appears, disappears, and then reappears in the building, it transforms itself, becoming not only the tracery that vents and hides ducts in the gallery vestibules, but also the embossed, blackened aluminum mesh that lines the theater like wild, 3D upholstery.

The concept of textiles as a wrapper was so integral to this project that the architects seriously considered sheathing the five-story mass in a stretchy, white Teflon membrane. But perhaps too literal in its interpretation of cloth (and therefore too architecturally imprecise in its detailing), that variation of the scheme was ultimately cast off in favor of the expanded-aluminum-mesh panels—evoking crushed silk or lightly crumpled origami paper—that cover the steel-frame structure. The same raw material, the metal mesh, that the architects used here reappears in a very different incarnation in the theater. But why allude to fabric at all (or even more explicitly, swathe a building in it)? And why introduce

The museum shop (right), with a ceiling of lightly crumpled aluminum mesh echoing the exterior, stands at street level, below the restaurant. At the opposite end of the extension's brick-paved thoroughfare (below), steps lead up into the original Barnes building, which Herzog & de Meuron renovated.





PHOTOGRAPHY © FLOTO + WARNER / THIS PAGE: OPPOSITE AND THE FOLLOWING SPREAD

The new galleries (right), like the original ones, are all white with terrazzo floors and parallel ceiling beams. Whereas Barnes chose concrete beams, Herzog & de Meuron used steel members, alternating with conduits. The airflow system for the new galleries also involves the intake vents, hidden behind tracery in the vestibules.





THIRD LEVEL

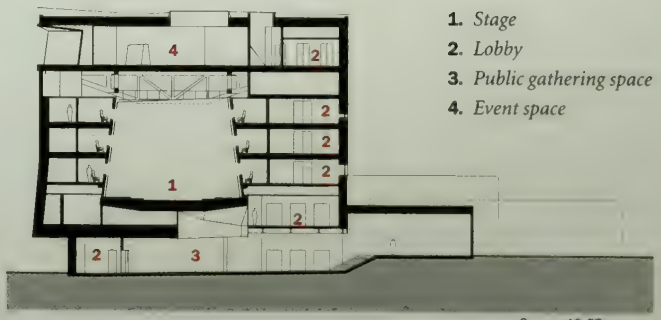


FIFTH LEVEL

1. *Ticketing*
2. *Museum shop*
3. *Shop support*
4. *New gallery*
5. *Existing gallery*
6. *Garden pavilion/ outdoor gallery*
7. *Entry from parking*
8. *Theater*
9. *Terrace*
10. *Mediateque*
11. *Mediateque lounge*
12. *Mediateque gallery*
13. *Conference*



FIRST LEVEL



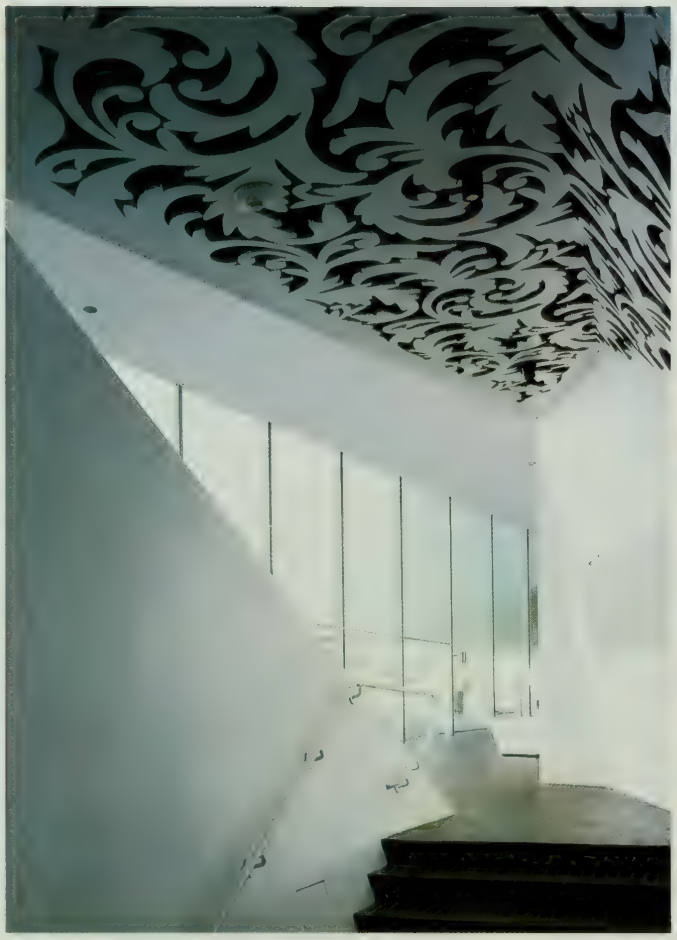
SECTION A-A

1. *Stage*
2. *Lobby*
3. *Public gathering space*
4. *Event space*



In this high-ceilinged new gallery, filling the boxlike volume closest to the Barnes building, the architects inserted an oversize swatch of lacy grillework as a wall panel. This element brings in daylight—reflected on the polished terrazzo floor—while appearing almost like a piece of artwork on the wall.

Prismatic passageways offer transitions between wide open spaces and more compressed areas, allowing visitors to adjust their eyes as they leave the sun-washed public zone (below). The restaurant overlooks the city (right bottom).







swatches of such voluptuous, almost Baroque patterning?

As Halbreich tells it, the architects were after more of a traditional La Scala–type theater than a black box. And, she says, "the original idea was to wrap its interior in organza, like a curtain, but that wasn't working. Then one day, [Herzog & de Meuron partner] Harry Guger said to Jacques [Herzog], 'Think lace underwear'—and so, they blew up an actual piece of lace until it became an abstract, funny diagram of itself." She likens the process to "the way art, including recent work at the Walker, is often made these days—somewhere between the natural and the man-made. Early on, someone was inspired by nature, then there was a mechanically produced iteration, and later it was manipulated virtually."

The notion of a fabric wrapper is also intimately tied in with the evolution of Herzog & de Meuron's work—and consequently a strong reason why the firm won this commission. "We were looking for an architect with an imaginative engagement with transparency," Halbreich says. "The Barnes building is such a hermetic, Minimalist sculpture that it was time for the institution to become more porous—more open physically and visually to the city." Though Herzog & de Meuron has not always focused on transparency or openness per se, the practice had a long history of dematerializing exterior walls—often in unexpected ways.

Even when partners Jacques Herzog and Pierre de Meuron have given earlier buildings an outer shell of glass, it has been a far cry from any conventional glass curtain wall. In the past, the team has silk-screened its glazing with such patterns as dot grids or the repetition of a single photographed leaf and—contrary to standard usage—layered the glass over opaque materials. As a result, the work has simultaneously offered and denied the specter of complete transparency, or near disappearance of the wall, as in the Rossetti Hospital Pharmacy [RECORD, August 1999, page 88]. Such composite walls, creating a moiré effect with patterning while leaving a visible and fairly deep air space between the layers, paradoxically evoke both substantial thickness and an ethereal quality.

Exploring a range of materials, the architects gave REHAB [RECORD, June 2005, page 116] an exterior veil formed by a fine brise-soleil of wood poles. And at the Dominus Winery, they built an exterior wall by simply piling rocks in steel gabions, or cages, with air instead of mortar between the stones, suggesting both the presence and absence of solidity—



Taking the traditional theater to its Baroque extreme, the wall upholstery consists of expanded metal mesh, embossed with a 3D lace pattern and painted black (this page and opposite, top right).

a weightiness coupled with a surprising lack of material substance.

At the Walker, as at Dominus and REHAB, the porous outer sheath is not the actual rain shield, but a layer analogous to clothing draped over our skin. (It seems tempting to ascribe this approach in some way to the fact that Jacques Herzog is the son of a seamstress—or to the ideas of 19th-century theorist and architect Gottfried Semper. Often cited by scholars of Herzog & de Meuron's work, he defined textile wall coverings or screens as a fundamental element of architecture, essential to defining space.)

The Walker's expanded metal mesh, fabricated by cutting slits in sheet metal without any loss of material (unlike the perforation process), provides a stretchy, deformable, netlike, and utilitarian grate (used for steps and wastebaskets) that Herzog & de Meuron, in its signature approach, has applied in a novel way. Each panel forms an 8-inch-deep, six-sided mesh block that under optimal light conditions creates shimmery moiré effects.

But much as the mesh changes appearance with the light and the cube remains both hefty and floating, the skin does not seem to dematerialize quite enough. It stops short of lending the bulky volume that exquisitely ghostly fluctuation between material presence and near vanishing that characterizes much of Herzog & de Meuron's work. Though the building may suggest an exaggerated ice cube in form, its surface lacks ice's elusive depth.

But the building succeeds in many other ways. In a remarkable feat of circulation, it splices together the old and new masterfully. With a spirit of playfulness unprecedented in the Barnes structure, the extension engages the city. The seemingly quirky window shapes actually frame specific views of downtown, while the glass corridor on street level connects the museum visually with the traffic artery of Hennepin Avenue.

While the new exhibition spaces provide the comfort of familiarity, they also embody a certain perversity, even a letdown. When you approach the prismatic silvery form from the street, you expect the galleries to provide a culmination of the architectonic qualities of the spaces surrounding them. But instead of arriving at a Caligariesque experience—or at least the nondistracting essence of it—you're suddenly back home again. ■

Sources

Expanded aluminum mesh: *Lilja (custom stamped panels)*

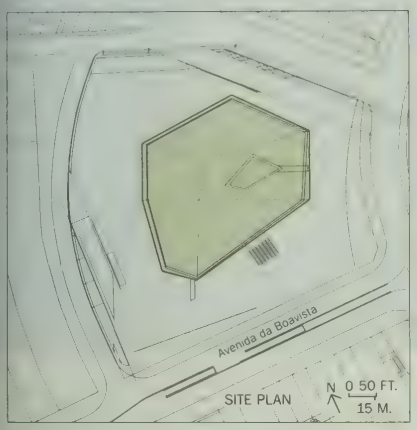
For more information on this project, go to Projects at **www.architecturalrecord.com**.



Rem **Koolhaas/OMA** challenges old notions of what a concert hall should be in the sculptural **CASA DA MUSICA** in Porto, Portugal

The building faces Boavista Park on one side (right) and the urban fabric of the city on the other sides (bottom right and site plan, below). It sits on a stone plaza (opposite).







By David Cohn

Like an ungainly barge or lopsided spaceship, the abstract sculptural form of Rem Koolhaas's Casa da Musica has made a splashy landing in Porto, Portugal's second-largest city, overturning conventional ideas of concert-hall decorum with the Dutch architects' characteristically edgy sense of style. Designed to attract audiences of many different musical persuasions—from acid jazz and samba to classical symphonies—the project aims to be an international landmark that gives Porto a boost amid Portugal's current economic malaise.

Posed in its own plaza beside a circular park that interrupts a grand avenue connecting the old city to the nearby Atlantic, the Casa da Musica starts upsetting conventions at the front door, offering a new take on the art of making a dramatic entrance. Located midway up the building's hull-like volume, at the top of a theatrically backlit stair with balustrades of frameless glass, the entry is a glass slot tilted at a rakish 45 degrees that slides open to let concertgoers inside. In the warped space of the hull, twisting runs of stairs and decks climb the outward-leaning walls past soaring angled structural elements to the concert hall, the building's calm center. Inside the hall, large windows at either end bring in views of the sky before the music begins. Glazed openings let the audience see into brashly colored secondary spaces that are hung around the concert hall like

David Cohn is RECORD*'s international correspondent based in Madrid and the author of* Young Spanish Architects *(Birkhauser, 2000).*

Project: *Casa da Musica, Porto, Portugal*
Owner: *Casa da Musica*
Architect: *Office for Metropolitan Architecture—Rem Koolhaas, Ellen van Loon, partners in charge*
Associate architect: *ANC Architects—Jorge Carvalho, partner*
Engineers: *Arup; AFA*
Consultants: *Ducks Scéno (lighting); TNO and Dorsser Blesgraaf (acoustical); ABT and Arup (facade); Inside-Outside (curtains); OHM/Gerisco (codes)*
General contractor: *Somaque/Mesquita*

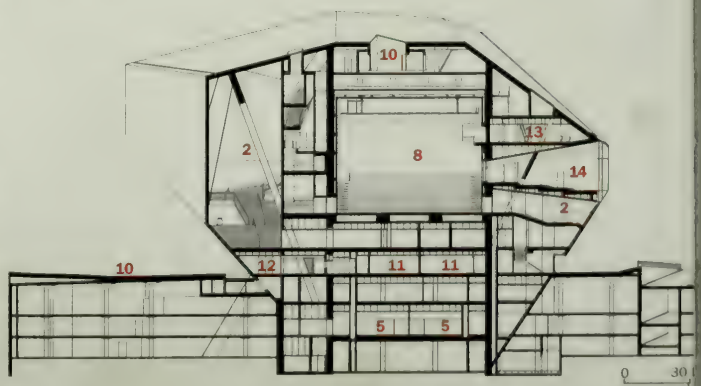
saddlebags and poke out of the exterior skin in unexpected places.

The Casa da Musica was meant to be the star attraction of Porto's year as European Cultural Capital in 2001, but planning began too late to meet this deadline. Koolhaas won a hurried competition in 1999, in which Dominique Perrault and Rafael Viñoly were the only other firms who met the rush to submit proposals. Construction then lagged through three city governments and five Casa da Musica directors, and the center opened in April. It serves as home for the National Orchestra of Porto and includes special features—a cyber-music workshop, an educational theater for schoolchildren, and a highly flexible chamber music hall—designed to reach diverse audiences.

The building stands on the site of a former trolley yard, facing Boavista Park in a transitional neighborhood of 19th-century houses and large new buildings. Breaking the street wall to create a sculptural object in a plaza was a quick way, according to Koolhaas, to "resolve issues of symbolism, visibility, and access in a single gesture." The plaza, paved in a rusty Jordanian travertine, rises up at two corners for the entries to the underground parking and provides space for a future café and kiosk meant to encourage street life; its roiling curves are a rollerblader's delight.

Isabel da Silva, head of OMA's Porto office, confirms the story

1. *Foyer*
2. *Ticket office*
3. *Office*
4. *Rehearsal*
5. *Soloist room*
6. *Bar*
7. *Auditorium*
8. *Restaurant*
9. *Terrace*
10. *Dressing room*
11. *Musicians' canteen*
12. *Education*
13. *Cyber music*



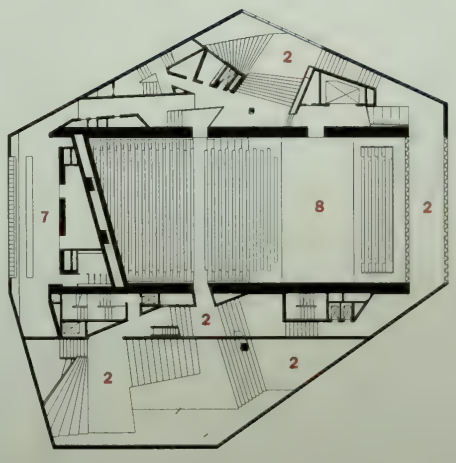
SECTION A-A

Visitors enter the building by climbing a grand stair (opposite) that is backlit at night. Though at first it looks like an alien presence, the concert hall refers to the work of Siza in its concrete shell and angled forms (above).



FIRST FLOOR

N 0 20 FT. 6 M.



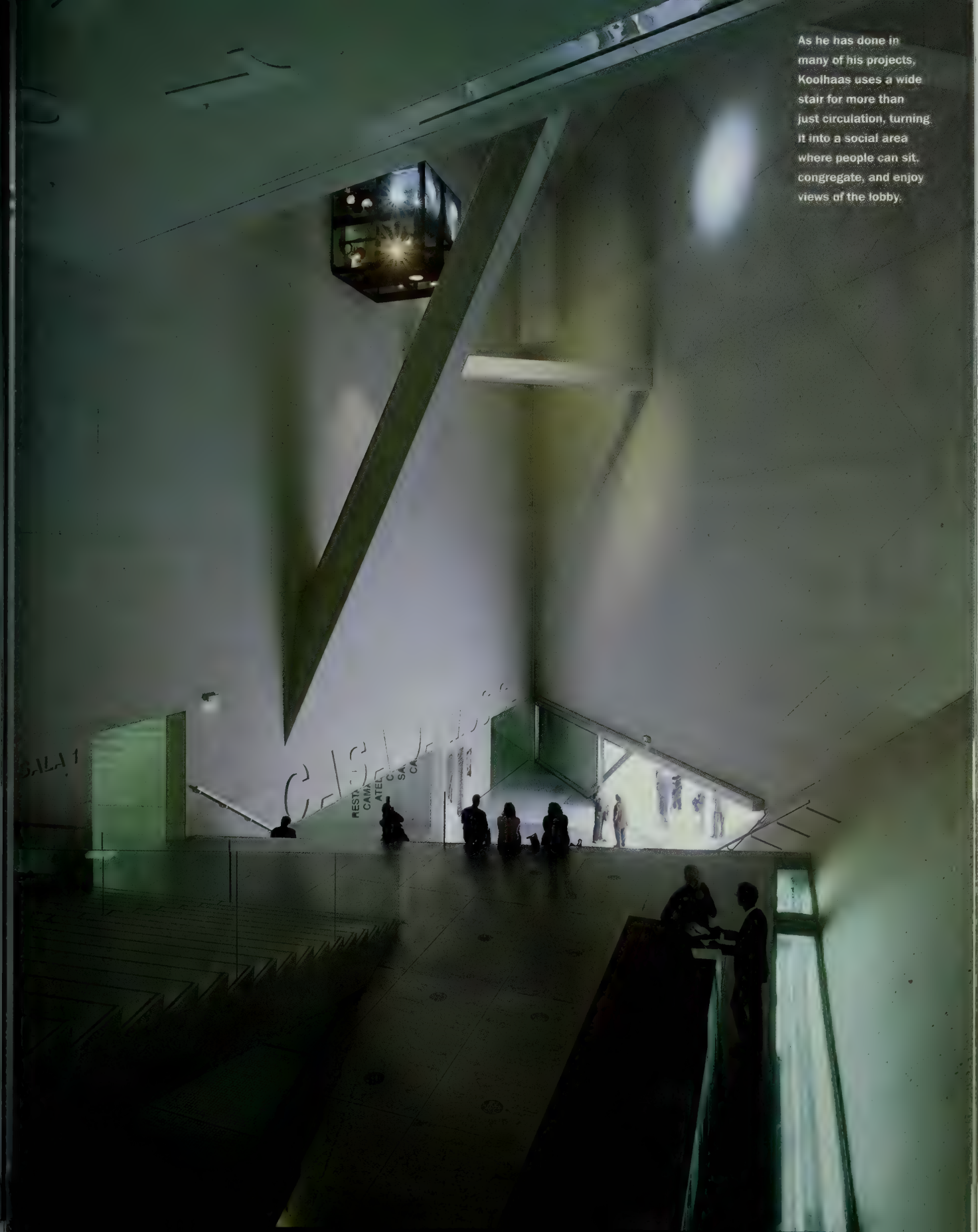
THIRD FLOOR



SIXTH FLOOR



Some of the most dramatic elements are the circulation spaces woven between the auditorium and the canted structural envelope. Lighting gives these spaces a cinematic feel.



As he has done in many of his projects, Koolhaas uses a wide stair for more than just circulation, turning it into a social area where people can sit, congregate, and enjoy views of the lobby.

that the competition scheme was a blown-up version of an unrealized design for a private house in Rotterdam where "the client wanted to separate male and female zones around a common central room." This concept worked for the Porto program as a way of creating separate areas for the public and the musicians and bringing them together in the concert hall. It also served Koolhaas's goal of breaking open the traditionally closed concert-hall box to the activity around it and the city outside.

The main auditorium is at the heart of the scheme, its windows aligned to the east and west, parallel to the axis of the main avenue outside. Other key elements—such as a red-stained chamber music hall at the top of the building, a VIP room lined in a Pop collage of hand-painted Portuguese tiles, a children's workshop decked out with purple walls, and a green cyber-music room—occupy spaces that sit on either side of the auditorium.

These secondary elements echo the schematic idea of the concert hall itself—working as spatial slots, glazed at each end and tunneling through the mass of the building at different angles. Conceptually, they are spaces that have been eroded from the mass of the building, like the key programmatic elements in Koolhaas's competition entry for the National Library of France. But in Porto, the architect wrapped this spatial collage in



As visitors move through the building, the architecture offers them changing views of the city and surrounding neighborhoods (above) and slices of the building's interior (right).

Sandwiched between planes of corrugated glass, a foyer off of the main auditorium provides visual connections between the building and its surroundings.

The architects boldly mixed modern materials with antique furniture and traditional tiles in a VIP lounge (above). In another space, rubber flooring and mirrored wall tiles play with reflection and perception (right). Corrugated glass allows light inside the concert hall without ruining the acoustics (opposite, top). A cyber-music room enjoys views of the city (opposite, bottom).



faceted concrete, creating a more suggestive and sculptural volume than he did with the boxy French library. Public circulation weaves through the interstitial spaces between the canted building envelope and the various performance and secondary elements, turning the task of getting from one place to another into an adventure. Designed with structural engineer Cecil Balmond at Arup, the Casa da Musica's exterior is a self-supporting, continuous folded plane. "You move one part and everything else moves," OMA's da Silva explains.

The main public spaces completely encircle the concert hall: the entry lobby underneath it, a skylit restaurant and terrace above it, and large glazed foyers on each side of it—one with a transparent bar suspended amid the building's stainless-steel structural elements. An informal amphitheater on the roof of the chamber music hall features a retractable skylight with ocean views. The architects envision that these spaces can host a multitude of activities simultaneously or one enormous party. Support spaces are located on lower floors, and in the same spirit of collision/collage, many are disconcertingly exposed to pedestrians on the plaza, who can look through large planes of glass to see inside offices, several soloists dressing rooms, and the musicians' canteen.

Innovative details provide much of the building's visual delight.



The main auditorium assumes the shoebox form favored by many musicians (above and opposite two). Koolhaas played with scale and notions of value by using plywood on the walls, then embossing it with gold enlargements of its grain. An acoustical pillow floats above the stage, and fake organs project from the walls. The architects wrapped a small music hall in red-stained, perforated plywood (right).







In the 1,300-seat main hall, which is surprisingly intimate both spatially and acoustically, OMA developed a sensuously curving "corrugated" glass to meet acoustical requirements that straight glass couldn't offer, and replaced the traditional proscenium with a PVC canopy over the stage that inflates and deflates to change the acoustical resonance. The architects clad the interior of the hall in plywood veneer finished with a gold-colored graphic that is an enlargement of the material's grain, a Pop allusion to Porto's gold-encrusted Baroque churches and an ironic play on expensive versus cheap materials. The hall's organs are fakes, required by acoustical engineer Renz van Luxemburg when the client had to cut the real ones from the budget. Handsome bank seating by Belgian designer Maarten von Severen, who died just before the hall opened, features illuminated seat numbers in the transparent latex armrests that double as program reading lights. Amsterdam designer Petra Blaisse of Inside/Outside, who has often worked with Koolhaas, designed knotted-nylon curtains that can be drawn in front of the hall's glass sides.

In the foyers, OMA finished floors and stairs with brushed aluminum, and used perforated aluminum panels with recessed fluorescent lighting for ceilings and walls. In the lounges, the architects specified classic 1960s chairs by Portuguese designer Daciano da Costa that share the off-kilter proportions found in Álvaro Siza's more recent furniture.

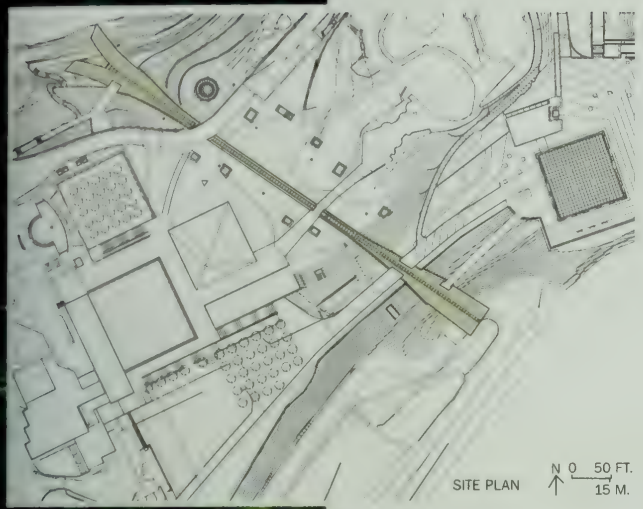
Like other recent OMA projects—such as the Seattle Public Library and the CCTV tower in Beijing—the Casa da Musica uses off-balance forms to create a kinetic experience for visitors as they move around and through the building. The project's crisscrossing chutes of space and vividly plumaged interiors engage us in an almost visceral relationship, even as they unfold in eye-popping, cinematic fashion. Leave it to Rem to call attention to architecture's direct, physical appeal, while at the same time reminding us of its choreographed artifice. ■

Sources

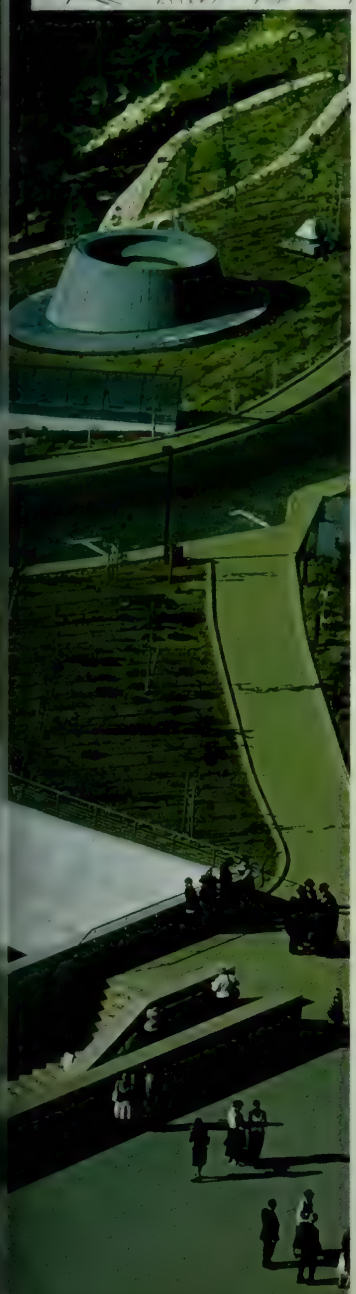
Concrete: *Unibetão*
Precast concrete: *Prégaia*
Skylights: *Facal*
Glass: *Cricursa; Saint-Gobain*
Cabinets and custom woodwork: *Interescritório*
Wall/ceiling tiles: *Viuva Lamego*
Foam-pyramid surfacing: *Merford*
Rubber surfacing: *Rephouse*
Antique furniture: *Pedro Aguiar Branco*
Auditorium seating: *Maarten van Severen*
Reception furniture: *Vitra*
Rubber surfacing: *Rephouse*

For more information on this project, go to Projects at **www.architecturalrecord.com.**





Moshe Safdie offers a memorial journey through the depths of a Jerusalem hillside with his YAD VASHEM history museum



PHOTOGRAPHY: © TIMOTHY HURSLEY

Crowning the Mount of Remembrance, in Jerusalem, Yad Vashem's 45-acre campus forms Israel's National Memorial to the Martyrs and Heroes of the Holocaust. There, Safdie's history museum, a 575-foot-long, skylit building, tunnels through the hillside, emerging at one end with expressively curving planes of concrete (left).

By Andrea Oppenheimer Dean

Only in Jerusalem. Place plays a central role in the new Holocaust History Museum at Yad Vashem, Israel's National Memorial to the Martyrs and Heroes of the Holocaust. The building, by Moshe Safdie, FAIA, expresses in eloquent architectural shorthand the nation's raison d'être. As Chaim Weizman, Israel's first president, described it, the Nazi years divided the world into two kinds of countries: those where Jews could not stay and those to which they could not escape. Had it not been for Palestine, later Israel, six and a half million, instead of six million, Jews would have perished in the Holocaust.

On the Mount of Remembrance, a verdant hillside dotted with evergreens and wild flowers overlooking Jerusalem's western outskirts, Safdie's new history museum crowns Yad Vashem's recently revitalized 45-acre campus. The recent master plan includes a bridge to the history museum, linking it to the existing complex, which includes a 1986 children's memorial by Safdie, as well as a Holocaust art museum, synagogue, and visitors' center. The history building's program called for more than 40,000 square feet of exhibition space. Because the architect did not want to build on "this fragile lovely landscape," he explains, he tunneled a 575-foot-long, triangular concrete volume into it. On opposing sides of the hill, the museum's entrance and exit emerge from the earth in dramatic cantilevered platforms.

Safdie won the Yad Vashem commission in 1993, the year the United States Holocaust Memorial Museum, by Pei Cobb Freed & Partners [RECORD, July 1993, page 58], opened in Washington, D.C.—the first Holocaust museum outside of Israel. Meanwhile, Yad Vashem had already outgrown its dated 1973 building of mediocre design, a structure currently undergoing demolition. (Yad Vashem's new museum took so many years to reach completion because of bureaucratic issues, as well as the need to gather the required funds.) Safdie and his client, the Holocaust Martyrs and Heroes Remembrance Authority, envisioned a

Andrea Oppenheimer Dean is a contributing editor to RECORD. *Her most recent book is* Proceed and Be Bold: The Rural Studio After Samuel Mockbee.

Project: *Yad Vashem Holocaust Museum Complex, Jerusalem*
Architect: *Moshe Safdie and Associates Architects—Moshe Safdie, FAIA, design principal; Irit Kohavi, principal, project architect, and manager; Gene Dyer, project architect; Paul Gross, Hugh Phillips, Leon Weizman, Dudi Tolkovsky, Aliya Avery, project team*

memorial very different from its 1973 predecessor and from the Washington scheme, which in many ways served as a foil. The austere exteriors of that milestone building, by James Ingo Freed, FAIA, reference the death camps as factories. The interiors appear dark, with extensive photographic exhibits, chronicling the six million dead as a collective entity—mainly from the viewpoint of the Nazis, who meticulously documented their own actions in films and still photography.

With the number of survivors dwindling, a 21st-century museum would ultimately "have to talk about the Holocaust without [their voices]," says Aver Shalev, chairman of Yad Vashem and chief curator of the museum since 1993. He hoped to breathe life into the horrific events by presenting them through the individual experiences of some 90 survivors—their diaries, letters, artworks, photographs, and other personal possessions. Yad Vashem means "a memorial and a name" (Isaiah 56:5)—and Safdie's work gives names to the once-anonymous dead. If the Washington museum serves as the Holocaust's Thucydides, its historian, then the new Yad Vashem is its Homer, its poet and storyteller, enlivening the defining moments of a culture through the trials of individuals.

Regarding the building's design, Safdie says, "I wanted something so primeval and archaeological that you don't think about the architecture." He took inspiration from the ruins of Qumran, in Jordan, a series of interconnected, partially underground spaces, where the Dead





At the end of the long, tunneling form, visitors emerge into open air (this page and opposite, top). Here, the canted concrete walls curve outward, as a low glass barrier keeps people from falling over the edge. The square entry pavilion glows at dusk (opposite, bottom).





Sea Scrolls were found, along the Sea's northwest shore.

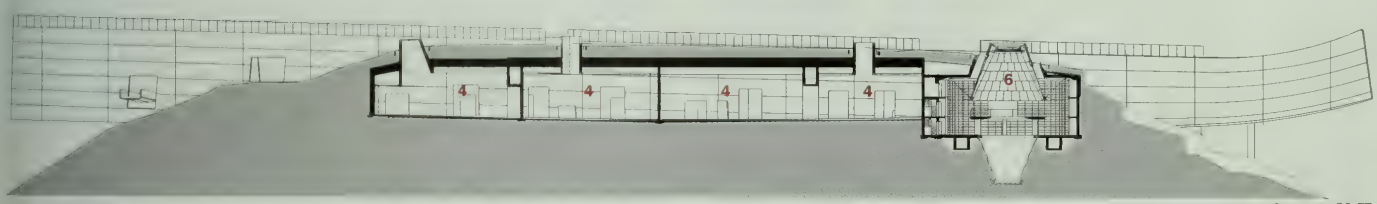
His scheme—a post-tensioned, cast-in-place-concrete structure without insulation, interior or exterior cladding, and visible joints—is utterly minimal. The architect gave the building a triangular section to support the earth above it and rise toward a skylight running its entire length. Rather than create a dark museum, the architect and his collaborators let the content of the exhibits communicate the terror of the Holocaust.

Along with museum designer Dorit Harel, Safdie configured the 42,500-square-foot interior—three times the size of its 1973 predecessor—as a long walkway with side galleries, each providing a chapter in the story. As the main path moves from south to north, it narrows and descends 5 degrees toward an exhibition about Auschwitz. Then it widens again and ascends. You "go from the darkness of the earth to light and hope," the architect says. Daylight at the end of the walkway is always visible.

Harel designed angular trenches in the floor that dictate the route, forcing visitors to go around them by entering each gallery along a prescribed path, much as Holocaust victims were marched from collection point to train station to camp to gas chamber. For the side galleries, however, the designers refrained from making such direct analogies with the Holocaust experience. Here, they tucked fire sprinklers—as well as mechanical, electrical, and plumbing systems—out of sight, to prevent associations with gas chambers. A 6-foot-deep plenum in each gallery

1. *Entry pavilion*
2. *Museum shop*
3. *Entry bridge*
4. *Exhibition gallery*
5. *Museum entrance*
6. *Hall of Names*
7. *Viewing terrace*
8. *Exit bridge*
9. *Sunken courtyard*
10. *Holocaust art gallery*
11. *Synagogue*
12. *Changing exhibits*
13. *Media center*
14. *Learning center*





SECTION A-A

Transverse routes, including the exit bridge (opposite, top), cross the building's long triangular spine. Light enters through a linear skylight at its apex. The architect created a luminous prism effect with the glazing of the transverse crossings (opposite, bottom). In the entry pavilion, a shading trellis of aluminum sections casts shadows beneath a large skylight (right). The flooring is of hand-chiseled Jerusalem stone.









In the Hall of Names (above left), the viewing platform hovers between two cones: one, overhead, bears identified photos of faces of the dead; the one below holds a pool of water reflecting those images.

hides these ducts, beneath skylights fitted with adjustable aluminum shading panels.

The exhibits begin with a video presentation by artist Michal Rovner, evoking the landscape of a lost world. She restored and collaged together old home movies from various sources, revealing Jewish life in Europe before World War II. At times, her creation brings to mind Marc Chagall paintings. The museum bookends this video art at its entrance with a display near its exit of quotes from survivors' diaries and plays, projected by artist Uri Tzaid on the walls of a contemplative space.

Along the journey through the tunnel, visitors encounter a replica of a typical 1930s living room of a German-Jewish family; photographs of a mass shooting, with contorted bodies in anonymous heaps; personal snapshots and other objects found on the victims; a wooden structure from one of the camps; a railway car; victims' shoes and clothing; and remnants of a prewar Polish synagogue.

The final gallery on the prescribed path is the Hall of Names, centered between two cones. One, rising about 30 feet, is lined with 600 photos of individuals alongside their names. The faces stare down at you like the people in photos from the annihilated Polish shtetl of Ejszyszki, displayed in a chimney-shaped tower in Washington's Holocaust museum. At Yad Vashem, the images are reflected in a pool inside a second, inverted cone. Excavated to the water table, the lower cone commemorates Holocaust victims whose names are not yet known. Along the periphery of the Hall of Names, rings of shelves hold testimony—letters, transcribed oral histories, diary excerpts—from relatives and friends of two million known dead. Yad Vashem has amassed this documentation since its founding in 1953, and has reserved space on the shelves for data pertaining to the remaining four million. After leaving the Hall of Names, you reach the end of the long tunnel and step into a blaze of Jerusalem sunshine, where on either side of you, a sculptural concrete armlike extension of the building's shell sweeps upward.

"The museum's fundamental statement," Safdie says, "is that we emerge into light, that we've prevailed, and that Jerusalem and Israel are out there." ■

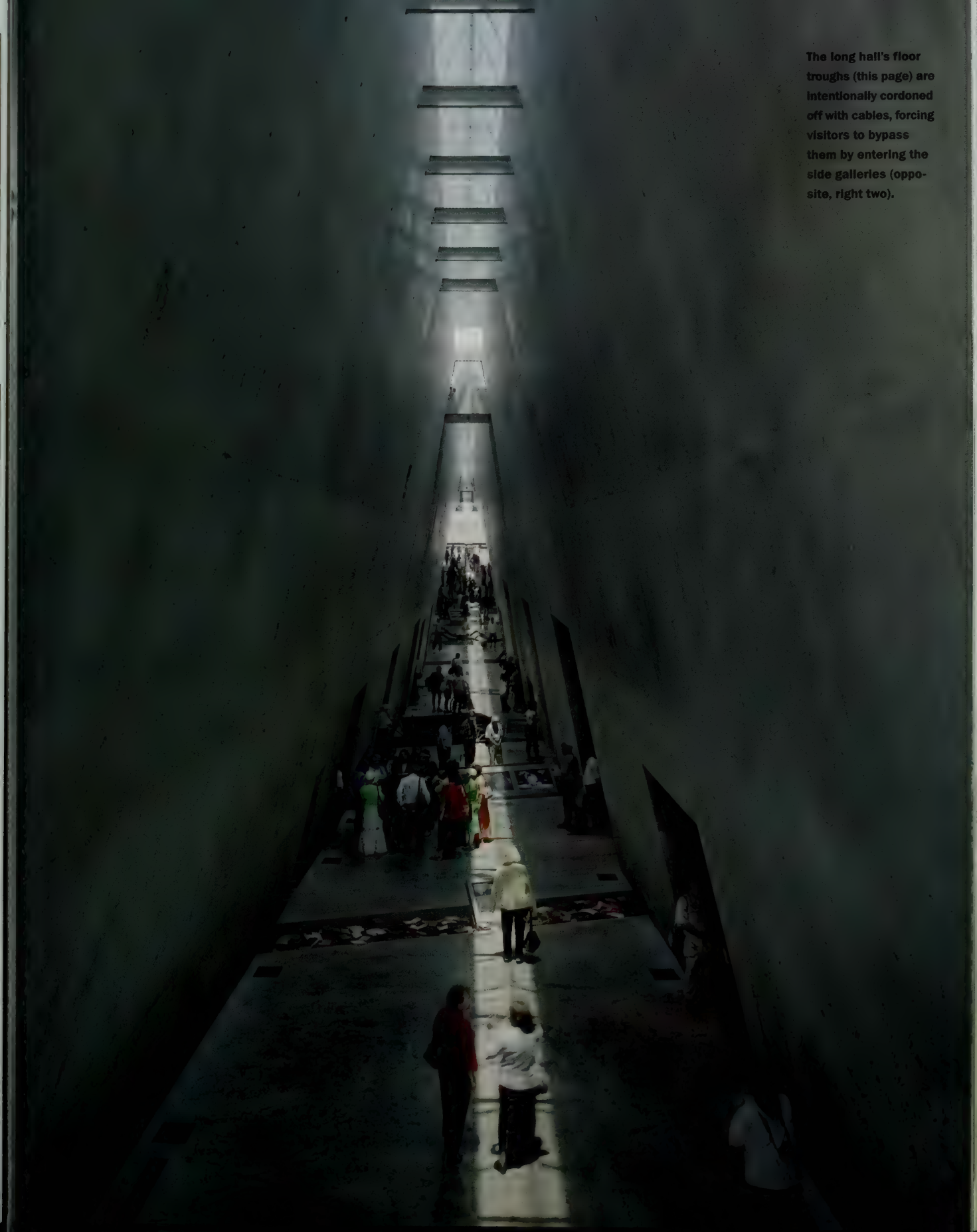
Sources

Glass: *Viracon (fritted insulated laminated)*

Skylights: *Minray (museum); Shuko/Weber (entry pavilion)*

Cabinetry: *Beit Alfa; Pitaro*

For more information on this project, go to Projects at **www.architecturalrecord.com**.



The long hall's floor troughs (this page) are intentionally cordoned off with cables, forcing visitors to bypass them by entering the side galleries (opposite, right two).

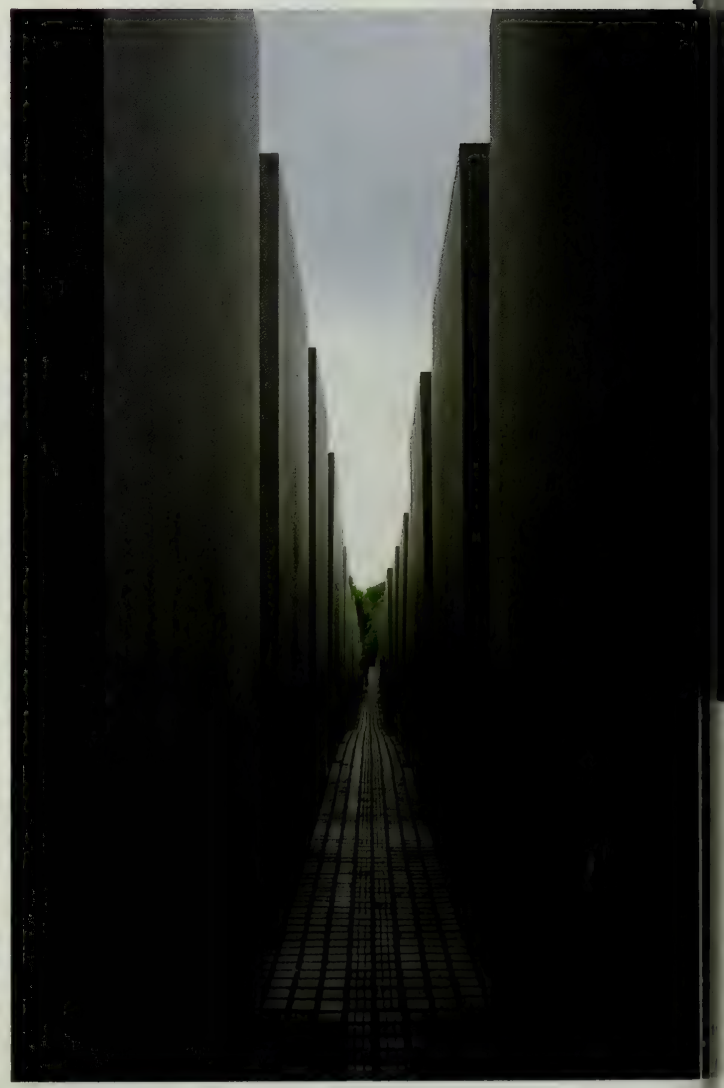
The centrally located, 5-acre memorial site, accessible on all sides, edges Berlin's Tiergarten, not far from Potsdamer Platz. Eisenman designed the 2,711 dark gray concrete pillars to appear from afar as a gridded field of blank markers embedded in rolling topography.



Peter **Eisenman's** vision for Berlin's **MEMORIAL TO THE MURDERED JEWS OF EUROPE**







As the visitor traverses the field of 3-by-8-foot pillars, their heights, ranging from a few feet to more than 15 (this spread), shift according to the contoured topography imposed on the flat site. They loom highest at the center of the site, where the terrain dips to about 8 feet below grade. Paths, also about 3 feet wide, are paved in concrete tiles (actually small cubic blocks) embedded in gravel. Certain paths, designated for wheelchair access, slope less, with tracks carved in the pavers to guide the wheels (right).









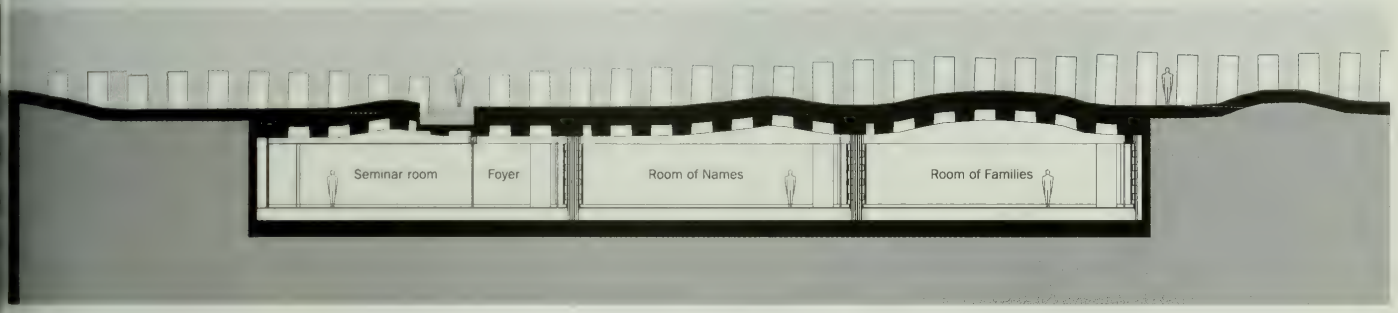


RTH-SOUTH ELEVATION



ST ELEVATION

0 30 FT.
10 M.



TION

0 10 FT.
3 M.

A 22,776-square-foot underground Information Center, containing exhibition galleries, seminar rooms, a bookshop, and offices, features a poured-in-place-concrete ceiling (sections, above) that repeats the contours of the site, with coffers and ribs the length and width of the pillars (opposite). From the memorial one can see the Reichstag (below).



By Suzanne Stephens

Designing memorials to the Holocaust is usually fraught with dilemmas peculiar to this unusually sensitive topic. Such philosophical questions as aesthetics, memory and memorialization, the nature of mourning, and the passage of time persistently confront the designer, and if left unresolved can subvert his or her original intention. Nevertheless, Peter Eisenman's Memorial to the Murdered Jews of Europe in Berlin, which was dedicated on May 10, addresses these issues in a particularly compelling manner. Although it is hard to predict how effective this solution will remain for future generations, so far the memorial has attracted throngs of people to its 4.7-acre site just south of the Brandenberg Gate. Eisenman's scheme, which has gone through several iterations since he, with sculptor Richard Serra, participated in an invited competition in 1997, fills that site behind the DG Bank by Frank Gehry [RECORD, October 2001, page 120] and at the rear of the newly reconstituted haute-luxe Adlon Hotel with 2,711 blank, dark gray concrete pillars—or as they are often called, steles. (*Stele* is the Greek term for a slab or upright stone, frequently inscribed, used as commemorative markers in ancient times.) These abstract forms, 3 feet wide and almost 8 feet long, vary in height up to 15 feet and occupy a grid with 3-foot-wide paths. Eisenman sculpted the flat site into rolling contours so that the steles' differing heights are exaggerated, then tilted them from .5 to 2 degrees in two different directions to maintain an overall unity of a level top (not slanted) within this changing topography. These elements—abstract forms, gridded plan, rolling terrain—adhere to the overriding theme of repetition with displacement, to create an immensely powerful kinesthetic, tactile, and visual experience. As visitors wander through the field, along very narrow paths, the steles loom taller in certain areas, and the ground sinks toward the middle to about 8 feet below grade. Soon the visitor may feel lost, or at least removed and isolated from the rest of the world. In this peripatetic journey, these various sensations merge into an aesthetic experience, where light and shadow and the smooth surfaces of the deeply rich dark gray concrete slabs create a singularly suggestive



The memorial's site, south of the Brandenburg Gate, was formerly the Reich's Ministry Gardens. Goebbel's underground bunker still edges it on the north. After the war, the land became a border area between East and West Berlin.

landscape. Aesthetics, owing to its association with beauty and pleasure, not surprisingly strikes an uncomfortable chord in any discussion of Holocaust memorials. Can an architect represent the hideousness of the event, but not make it so off-putting that people avoid it? Inextricably tied to this question of aesthetics and representation is the issue of memory: Specifically, how do you deal with such a terrible occurrence so that it is not forgotten? Concomitantly, how can the memorial allow visitors to recognize the horror, so they empathize with the victims? Empathy shouldn't depend on a cloying sentimentality, nor a cathartic dramatization that diminishes upon leaving the theater. Instead, it should foster the compassion needed to prevent such events from happening again. However idealistic this goal may be (obviously, barbarities, atrocities, and ethnic cleansing go on, and neo-Nazis keep springing up), it is necessary for working through or mourning the Holocaust.

The danger of becoming kitsch

Some 60 years later, many who actually were witnesses (or perpetrators) of the Holocaust are dead, so the "memory"—that which cannot be forgotten—has to be inculcated through other forms of representation, ranging from the literally and figuratively symbolic to the abstract. Ever present is the danger of kitsch, easily created by specifically referential objects, memorabilia, and architectural elements. For these reasons, Eisenman deliberately eschewed direct symbolism. As he explains, "We wanted a silent field—a deafening silence in the age of noise." (Silence is not quite a given here, but more about that later.) Eisenman also at first resisted an exhibition with a didactic component. After some pressure from the German Bundestag, he agreed to place an information center underground. There, a four-square grid of rooms containing exhibitions is cranked in plan 5 degrees from the grid of the landform above, which in turn is reflected in the undulating, poured-in-place-concrete coffered ceiling. Each room, slightly unsettling because of the ceiling, the slightly rotated plan, and the lack of windows, is dedicated to particular aspects of the Nazi extermination proceedings, with spaces around the rooms devoted to seminars, services, and a bookshop.

The exhibition, designed by Dagmar von Wilcken, appears straightforward and simple, thereby avoiding the overt sentimentality seen in the newly added exhibits at Daniel Libeskind's Jewish Museum in Berlin. (Libeskind didn't design the exhibits, but since they were installed after his museum had opened, too many people had got used to the severe emptiness of his zigzagging galleries.) In the case of the Memorial to the Murdered Jews of Europe, von Wilcken has skillfully integrated her exhibition design with the architecture, so that Eisenman's steles are not only reflected in the size of the coffers, but also in the sizes and shapes of the display partitions and benches. Together, the upper portion and the underground exhibition hall postulate a two-pronged approach to the representation and memorialization where one (the Information Center) is literal, explicit, and deadly earnest in its tone; the other (the field of steles) more abstract, open-ended, and ambiguous in the overall impression. Both are needed. "Actually, it was a good collaboration," Eisenman says.

Controversies from the start

The $30 million memorial is predictably controversial—as it has been since it was conceived in 1988 by Lea Rosh, a television journalist (who is not Jewish), and adopted by the Bundestag of unified Germany in 1999, which also set up the Memorial Foundation to build it. By 1999, Eisenman had already gone through three schemes, basically using the same concept, and Richard Serra, his initial partner, had dropped out—according to Eisenman, because of the artist's reluctance to make compromises that the client required to go forward. Architects, Eisenman acknowledges, must adjust. One of the initial controversies focused on its being devoted only to Jews, not to other victims of the Nazis, such as gypsies and homosexuals. (Lea Rosh replies, "The central goal of National Socialist genocide policy was the destruction of Jewry....The consummation of 2,000 years of anti-Semitism on this continent and the figure of six million Jewish victims

demanded a memorial dedicated to Jews.") Another controversy surrounded the choice of the site: It is so visible, and it occupies prime commercial and touristic real estate near the Brandenburg Gate. This gate or archway, like Paris's Etoile, faces the broad café-lined boulevard, Unter den Linden, and the aptly titled Pariser Platz (Paris Square). After recent construction, including the rebuilt Academy of Arts and the Adlon Hotel, this area looks more and more like the Champs Elysées in its prime. Interestingly, many of the Adlon's posh rooms afford panoramic views of the memorial.

The memorial's Information Center has clocked in an average of 2,100 visitors a day since the May opening and estimates that many, many more just stay above ground. So, ironically, Eisenman's stated intention of creating a place of isolation and contemplation has been somewhat subverted by numerous visitors roaming through the field of steles. Young people play hide-and-seek, laughing and calling out—not just six-year-olds, but teenagers. You see lovers trysting among the pillars, or tourists picnicking on their smooth tops. Others (specifically American visitors) wonder about being mugged there in the dark. No fence bounds the perimeter of the memorial; visitors to the underground Information Center must go through a security check by way of a temporary pavilion. (Eisenman designed a small, permanent concrete-and-glass pavilion for elevator access.) Günter Schlusche, the Berlin architect who coordinated the planning and construction of the project for the memorial foundation, explains that security guards patrol the field day and night to prevent unseemly or violent behavior. The well-crafted, compacted concrete steles were given a special finish to enable graffiti to be washed off. So far, only one small Nazi swastika has been removed, says Schlusche.

So far, Schlusche, the memorial foundation, and Eisenman seem not to be upset by the visitors treating it as a park. The playful behavior was unexpected, but it is not unwelcome. Perhaps this is okay (it depends on how long this popularity continues), although there is a limit. Nevertheless, it does make the descent into the Information Center, where the exhibitions are located, that much more powerful. There, hushed, softly luminous interior spaces with graphic and written texts gain immense impact for those coming from the above-ground area. The upper field becomes a transitional space—a place where both the lightness and vitality of the everyday world and the haunting reminders of the past converge. Downstairs, the seriousness of the past takes over. Eisenman's architecture achieves that experiential disconnect with the world in an eerily beautiful manner. Ironically, however, another thought-provoking perspective comes at a distance, from the rooms on the back of the Adlon. There, overlooking the field of steles, you watch visitors enter from the edges and then gradually disappear, seemingly for no reason. And that image is something you can't forget. ■

Project: *Memorial to the Murdered Jews of Europe, Berlin*
Design architect: *Eisenman Architects—Peter Eisenman, principal; Richard Rosson, associate; Sebastian Mittendorfer, Ingeborg Rocker, project designers*
Construction manager: *Architekt Manfred Schasler*
Client: *Stiftung Denkmal fur die Ermordeten Juden Europas*
Structural engineer: *Happold*

Sources
Self-compacting concrete: *Geithner*
Glass facade: *Bemo; Shüco*
Raised floor system: *Lindner*
Field lighting: *Zumtobel*

For details on the construction process, see Tech Briefs on page 165.
For additional details on the construction process and a fuller history of the project, visit **www.architecturalrecord.com**.

THE INFORMATION CENTER

A staircase and foyer below ground (below) separate seminar rooms from exhibition spaces. The galleries occupy a four-square grid turned 5 degrees against the grid of the poured-in-place-concrete ceiling and the field of steles, or pillars, overhead. The exhibition installation by Dagmar von Wilcken stays within a simple, straightforward aesthetic, as seen in the Room of Dimensions (bottom), where illuminated glass panels, the same size as the steles, display quotations from diary entries. The other galleries deal with specific themes, in addition to a database of names from the Israeli memorial site Yad Vashem.



1. *Foyer*
2. *Room of Dimensions*
3. *Room of Families*
4. *Room of Names*
5. *Room of Places*
6. *Testimony from Yad Vashem*
7. *Holocaust database*
8. *Bookshop*
9. *Information*
10. *Seminar rooms*



FLOOR PLAN N 0 20 FT. 6 M.



INSPIRED BY THE 19TH CENTURY. BUILT FOR THE 21ST.



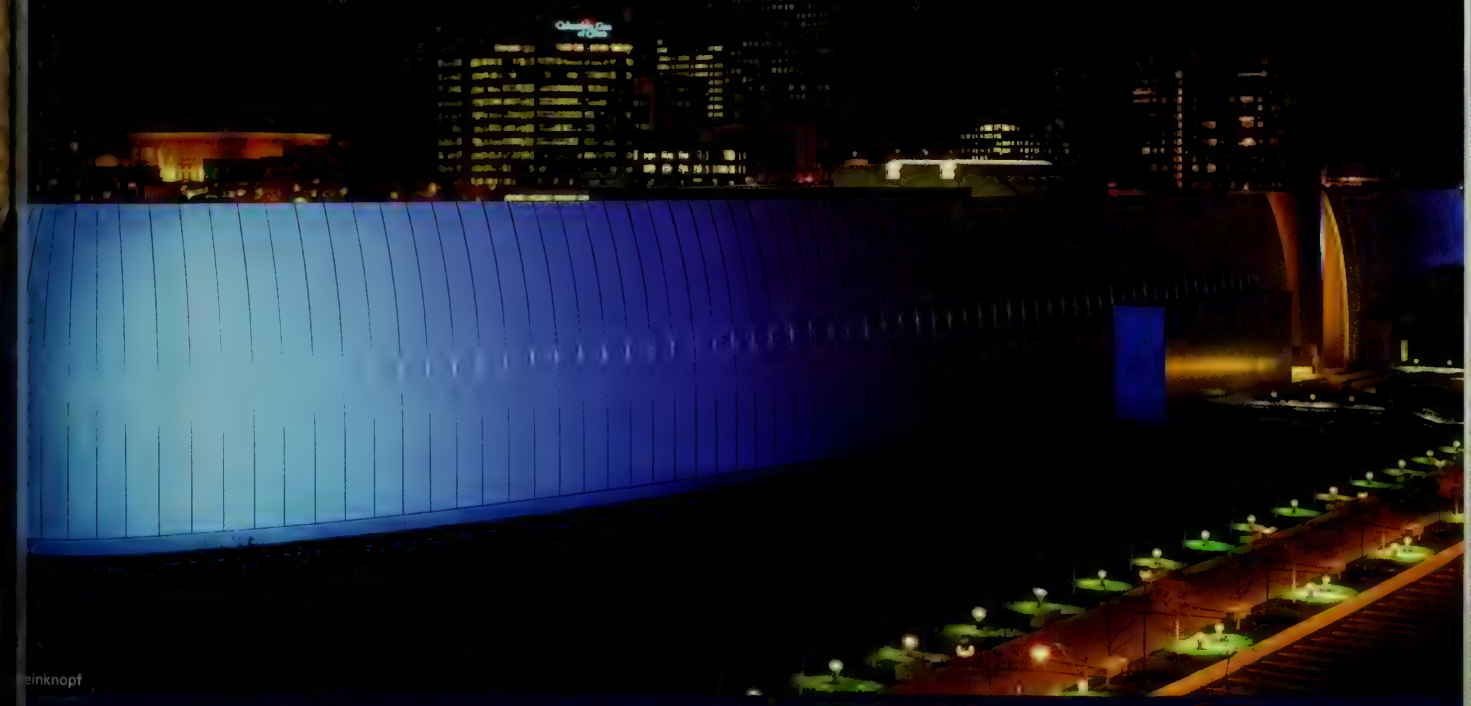
Over the centuries, the most prevalent roofing materials have been wood, slate and clay. Yet, for all their beauty, none of these materials can match the value of concrete tile. So we've combined the best of both worlds—the durability of modern materials and the aesthetics colors, shapes and characteristics of natural materials. We call it Aesthetic Innovation. And it's setting the standard in roofing for the next century. And then some. For more information, visit www.monierlifetile.com or call 1-800-571-TILE (8453) ext. 266.

1-800-571-TILE (8453) ext. 266
www.monierlifetile.com

MonierLifetile
Changing the way people think about roofs

CIRCLE 53 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

RETHINK PRECAST.



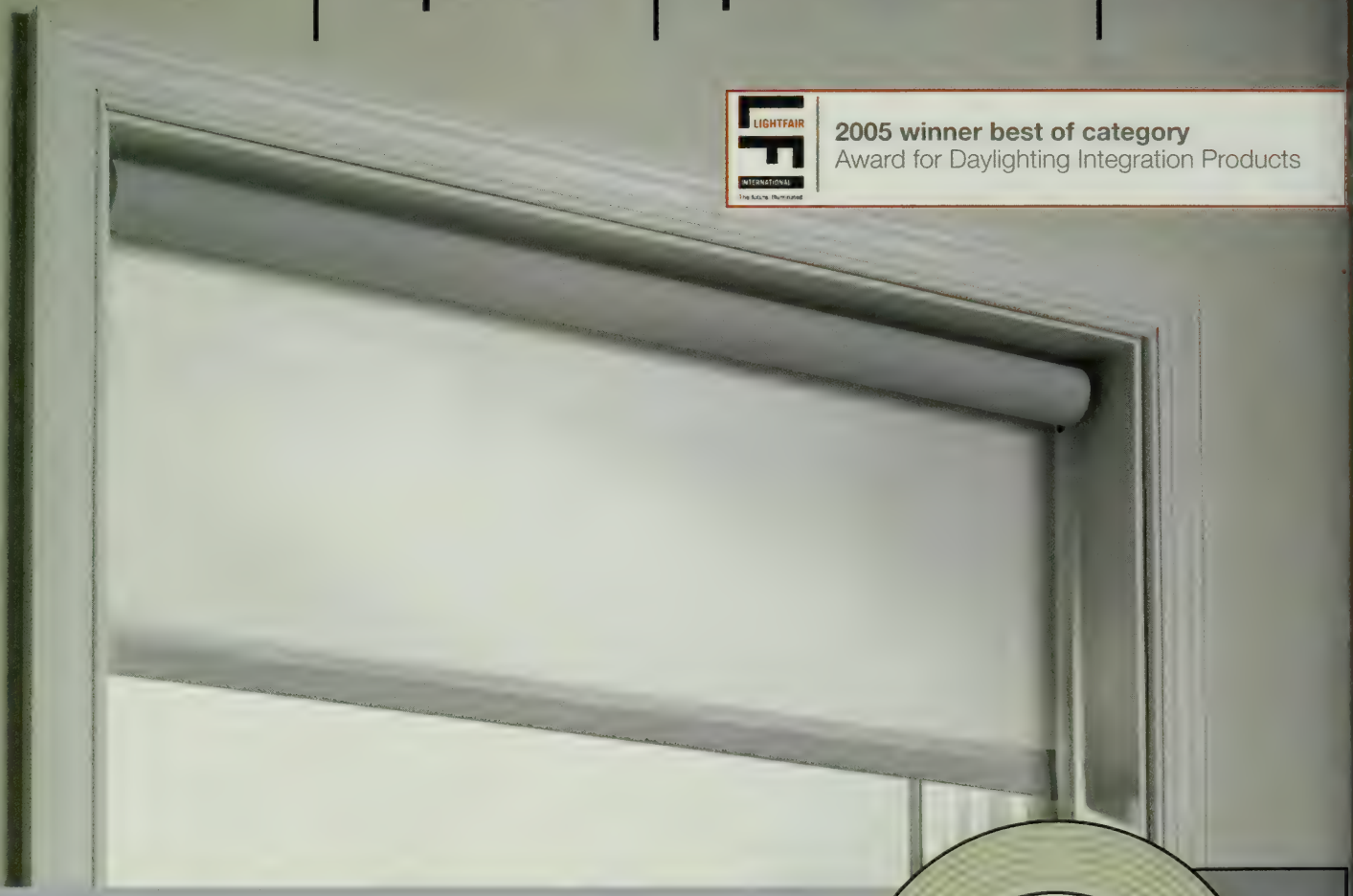
High lets you take precast design farther than you ever dreamed possible. That's why internationally renowned architect Arata Isozaki relied on precast concrete to meet the unique challenges of the striking Center of Science and Industry (COSI) in Columbus, Ohio. High's unparalleled commitment to new technology and innovation has led to advancements such as carbon fiber reinforced CarbonCast™—precast that's stronger, lighter and more durable, allowing a virtually unlimited selection of colors, textures and finishes at no additional cost. And the 15'-wide MEGA-Tee deck system enables wider spans and more open plans in total precast buildings and parking garages. Cutting-edge structures like COSI are possible with High's expert technical assistance in all phases of a project, from design to erection. High gives architects the flexibility to explore unique solutions while ensuring a job is completed on schedule and on budget. Call High to learn more about how to rethink precast.

HIGH CONCRETE GROUP

HIGH CONCRETE ▪ CONCRETE INNOVATIONS & ANSWERS® ▪ CALL US AT 800-PRECAST ▪ WWW.HIGHCONCRETE.COM

CIRCLE 54 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

small | quiet | precise | new



2005 winner best of category
Award for Daylighting Integration Products

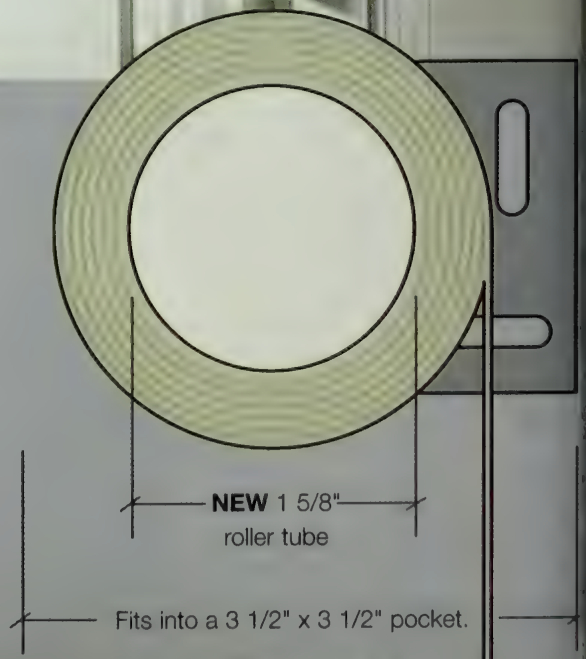
NEW Sivoia QED™ | roller 64™

Quiet, controllable precision shades to fit any window.

Adjust shade position at the touch of a button for effortless control of sunlight.

- minimize glare
- provide privacy or view as desired
- protect furnishings from sun-damage
- integrate with electric lighting controls
- easily installs inside shallow window jambs

For more information on the Sivoia QED family of precision drives for roller shades, draperies and Roman shades call **1.877.258.8766** ext. **541** or visit **www.lutron.com**.



LUTRON
Lutron controls your light..

© 2005 Lutron Electronics Co., Inc.

CIRCLE 55 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Fighting Sprawl

ARCHITECTS ARE DESIGNING HIGH-DENSITY PROJECTS THAT RESPOND TO THE MARKET'S DEMAND FOR MODERN HOMES AND SHORTER COMMUTES.



1.

Scottsdale, Arizona

Five units of three stories each fit comfortably into a very narrow site, angled to capture views of Camelback Mountain.



2.

Palm Springs, California

Desert pastels form a varied palette on the facades of this modern resort development that adds multifamily units to existing single-family dwellings.



3.

West Hollywood, California

A tight budget and site did not deter this architect from creating five units with flexible open spaces inside and cubelike, Modernist forms outside.



4.

San Diego, California

Tucked between two contrasting buildings and opposite the freeway, the two units of The Titan tie a disparate neighborhood together.

For more information on these projects, go to Building Types Study at **www.architecturalrecord.com**.

By Jane F. Kolleeny

First the bad news: By 2030, the U.S. population will have increased by 33 percent from current levels, says the U.S. Census Bureau. Planners, residents, and governments ponder where these people will live and what infrastructure will be needed to support them. The good news is homeowners are fed up with the long commutes inherent in sprawling suburbs. They want housing where jobs, retail, and entertainment are accessible. As a result, a growing number of them are moving to multifamily housing projects sprouting in urban and suburban infill locations.

Demographics are shifting, too. The prototypical family with children, which for decades has driven suburban sprawl, now accounts for less than one-fourth of households in the U.S., according to the *National Real Estate Investor* newsletter. Instead, young professionals, downsizing empty nesters, single parents, and couples without children bring a strong influence to the housing marketplace. These people prefer to live in high-density locations, where vibrant community activities take place.

According to the Urban Land Institute, this back-to-the-city movement will continue well into the 21st century. Cities have great advantages for housing. Existing properties can be reused and urban fabric strengthened. Property taxes can bring much-needed revenue to local governments and revitalization to inner-cities. Usually, the required infrastructure for housing is already in place, so residents can use public transportation and consume less energy. In fact, studies show that urban housing is the heartbeat of regional economic development.

Shown here are projects that in their own way contribute to the move toward urban infill and high-density living. They also demonstrate a refined modern design aesthetic. Will Bruder Architects' Loloma 5 straddles the sprawl of suburbia and a downtown edge on a tight property while preserving the local Modernist building traditions. In the resort community of Palm Springs, DesignARC's Palm Springs Modern Homes continues a tradition of Modernism that began with Eichler Homes in the early postwar years. At Orange Grove, Pugh + Scarpa added life to a densely populated West Hollywood neighborhood, working within constrained budgets on a tiny site. On an infill lot in downtown San Diego, The Titan, designed by Jonathan Segal Architect, features handsome live-work units that accommodate the growing number of people who work from home. By providing attractive alternatives to single-family sprawl, these projects set an example of how a more sustainable future can be reached. ■

Loloma 5
Scottsdale, Arizona

1 **WILL BRUDER DESIGNS A FIVE-UNIT CONDOMINIUM THAT COMBINES VIEWS AND OUTDOOR SPACES WITH A DOWNTOWN LOCATION.**

By Clifford A. Pearson

Architect: *Will Bruder Architects—Will Bruder, AIA, principal; Jeff Densic, project architect; Dominique Price, Joe Herzog, Rob Gaspard, Ben Nesbeitt, design team*
Client: *Context Development*
Engineers: *Rudow + Berry (structural); Otterbein Engineering (mechanical/plumbing); Associated Engineers (electrical); HTPO (civil)*
Landscape architect: *Burnette + Winters Landscape Architecture*
General contractor: *Preferred Building Systems*

Size: *7,700 gross square feet; five units of 1,540 square feet*
Construction cost: *$940,000*

Sources
Concrete block: *Western Block*
Zinc cladding: *VM Zinc*
Translucent plastic patio partitions: *Sequentia*
Ceramic tile: *Creative Design Flooring*
Paints and stains: *Benjamin Moore*
Resilient flooring: *Armstrong*
Granite parking paving: *Stabilizer Solutions*

For more information on this project, go to Building Types Study at **www.architecturalrecord.com.**

Poised between the undifferentiated sprawl of suburbia and a nascent urbanism where people live and party downtown, Scottsdale is wrestling with its future. While much of the fast-growing, post–World War II Southwest sprouted from arid soil like magic, Scottsdale has deeper architectural roots—including Frank Lloyd Wright's Taliesin West, Paul Schweiker's regionalist Upton House, and Paolo Soleri's Cosanti studios. Now, Will Bruder is working with an innovative developer on a series of multifamily housing projects that aim to build on the town's modern and frontier pasts, while pushing the design envelope forward.

The first of three housing complexes for Context Development, a Canadian company that recently entered the Phoenix market, Loloma 5 serves as a small-scale test for Bruder's ideas on juicing up suburbia with rich doses of urbanity. The second project, called the Vale, will be completed in August and offer 46 apartments (including nine live-work units), 7,000 square feet of retail, and a highly articulated street facade that engages the public realm. About the time that the Vale opens, Bruder and Context Development will start construction on a third project, the Upton, with 10 units for sale.

Program

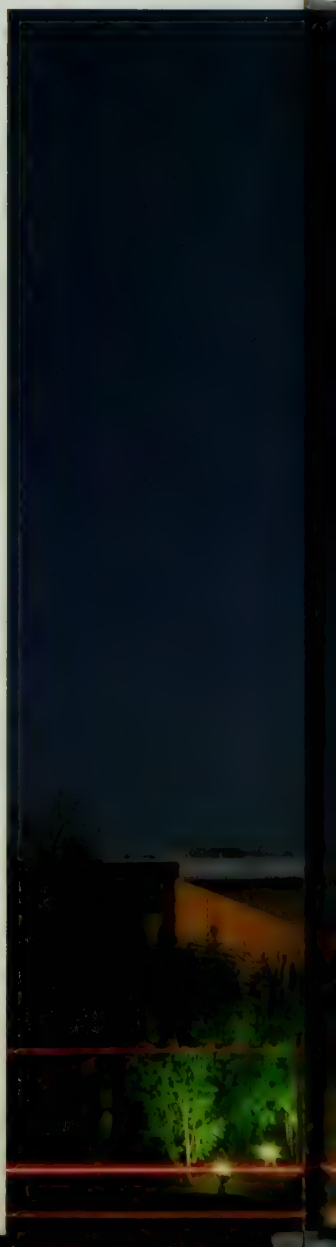
Given a narrow site (120 by 75 feet) in Old Town Scottsdale, Bruder needed to squeeze in five spacious town houses that would attract buyers who could easily purchase single-family houses elsewhere. He also needed to keep construction costs down to about $125 per square foot and follow green principles to reduce energy consumption.

The Old Town area retains a smattering of Spanish-style buildings set on wide, suburban streets. A live theater, an art school, a bus station designed by Vito Acconci, and the hip James Hotel by Deborah Berke [RECORD, August 2004, page 144] provide the nucleus of an emerging downtown scene. Bruder and Nicole Roberts of Context Development wanted Loloma 5 to tap into this mixed bag of old and new.

Solution

While most town-house developments line up living units along the street, Loloma 5's narrow site made such a scheme impossible. So Bruder treated the side of the building as a zinc-clad street facade and angled each three-story dwelling to capture views of Camelback Mountain to the northwest. A wide driveway on the north lets cars pull into covered parking on the ground floor of each unit, while a narrow walkway on the south offers an intimate, "canyonlike" space where neighbors can meet.

The mostly opaque street elevation recalls the false fronts of buildings in the old West. "It's a cow-

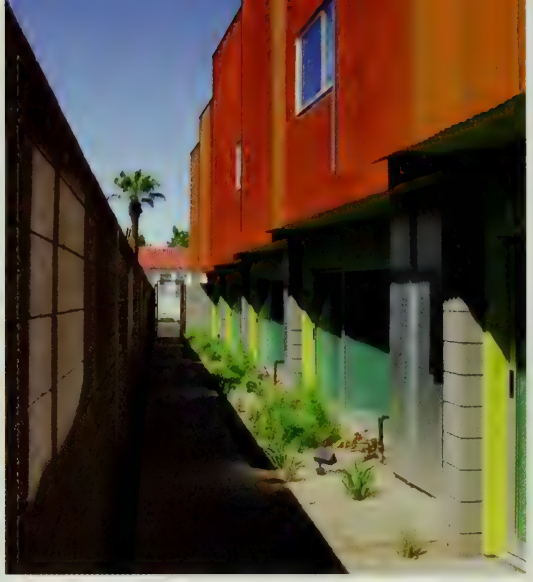


PHOTOGRAPHY: © BILL TIMMERMAN



Bruder used his most expensive material—zinc—on the building's street front and accented it with vertical slots of glass (below). Balconies turn to capture views of the mountains and are shaded by perforated-metal veils (left).







Controlling light and shade is critical in the desert, so Bruder designed a walkway as a "canyonlike" space (above two). Naturally rusting steel, perforated-metal screens, and concrete block stand up well to the climate (above two and below).

boy facade," says the architect. "You put your most expensive material forward to make a good show." Some desert landscaping by Burnette + Winters, including a large flat stone ideal for sitting, offers an attractive outdoor space in front of the building open to the public.

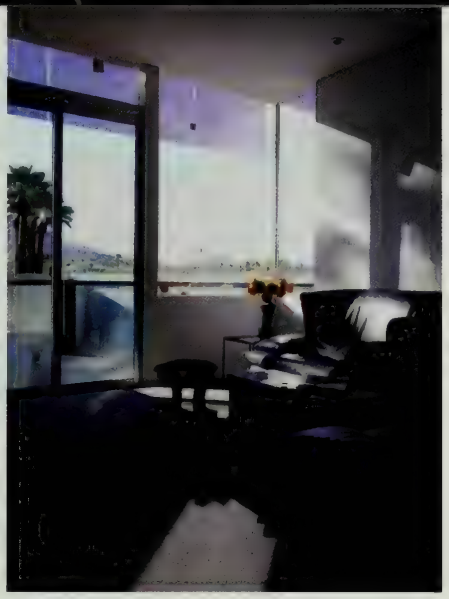
The five town houses are identical, with 1,540 square feet on three floors and pairings of decks and balconies turned to views of the mountains and the city. On the ground floor, each unit has a live-work space entered from the walkway. The main living spaces plus a balcony and a bedroom occupy the second floor, while the master bedroom and a large deck sit on the third floor.

The building combines concrete block on the first floor with wood framing above. Bruder wrapped the building in rugged materials, such as naturally rusting corrugated steel and perforated metal veils that protect the west-facing balconies. Viewed from an alleyway on the east end of the site on a late-spring morning, the sawtooth north elevation dances in shadow and light. Attuned to the demands of a desert climate, the building envelope blocks the sun from much of the living room and kitchen, while letting it slide inside through tall narrow slots to animate the spaces. Similarly, stucco walls and translucent plastic partitions on the deck help shade the outdoor space while directing views to the sky and the distance.

Commentary

Loloma 5 offers a persuasive alternative to the single-family home by packaging downtown living with attractive outdoor spaces and high design. Rusting steel and stucco surfaces painted what Bruder calls "pungently optimistic green" give the building a colorful buzz that works well with its muscular form. Although it accommodates the automobile with private parking for each dwelling unit, the complex also creates a public realm where residents can meet and develop a sense of community. ■





Mostly shaded from the sun, the kitchen is enlivened with light from vertical bands of glass (below). A balcony extends the living room outdoors (left), while a generous deck (far left) works with the master bedroom on the top floor.

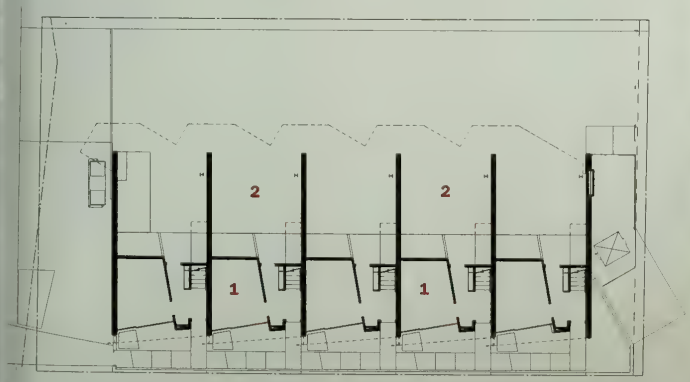


THIRD FLOOR



SECOND FLOOR

1. *Live/work*
2. *Parking*
3. *Living*
4. *Kitchen*
5. *Bedroom*
6. *Master bedroom*
7. *Deck*



FIRST FLOOR

N 0 10 FT. 3 M.



Palm Springs Modern Homes
Palm Springs, California

2 **DESIGNARC JOINS FORCES WITH AN IMAGINATIVE DEVELOPER TO CONTINUE A VERITABLE TRADITION OF DESERT MODERN DESIGN.**

By Joseph Giovannini

Architect: *DesignARC—Dion McCarthy, AIA, Mark Kirkhart, AIA, partners in charge; Douglas Peters, project manager; Emily Adamske, Ben Hidalgo, Raymond Urruty, team*
Interior designer: *LDC Design Studio (48@Arenas); Ligne Roset (48@Baristo)*
Owner: *Palm Springs Modern Homes*
Engineers: *Concorde Consulting Group (48@Arenas); Taylor and Syfan (48@Baristo)*
Consultants: *R.J.C.L.A. (landscape); Mainiero, Smith and Associates (civil engineer)*
General contractors: *J-Den Builders (48@Arenas); Ironwood Homes Corporation (48@Baristo)*

Size: *80,460 square feet (48@Arenas); 82,723 square feet (48@Baristo)*
Cost: *$10 million (48@Arenas); $15 million (48@Baristo)*

Sources
Exterior cladding: *Orco Block (block walls); Pacific Concrete (concrete floors, exterior flatwork)*
Metal awnings/fascias/entry gates: *Desert Postal Scapes*
Glazing: *Skyview Skylights*
Doors: *Atrium Door and Window Company; West Coast Custom Finish; General Aluminum*
Pools/spas: *EG and H Pool and Spa*

For more information on this project, go to Building Types Study at **www.architecturalrecord.com.**

There may be no second acts in American public lives, as F. Scott Fitzgerald once pronounced, but in Palm Springs, California, Midcentury Modernism has returned for a high-profile encore. In a series of very successful housing projects, DesignARC—with offices in Los Angeles, Santa Barbara, and Orange County—has taken up the ethos and architectural vocabulary of the resort's many Modernist buildings within the parameters of the speculative marketplace. Turns out, design sells.

From the time Lloyd Wright and Albert Frei erected their structures in this desert community outside Los Angeles, Modernists have enjoyed a strong presence in an environment especially suited to light, porous, indoor/outdoor structures. In the 1960s, A. Quincy Jones, fresh from his successes with Eichler Homes, built a spec development for Alexander Model Homes—one of only a handful of housing tracts in the U. S. designed as Modernist developments.

Program

About eight years ago, Dennis Cunningham of Palm Springs Modern Homes began building houses in a Modernist spirit on a variety of lot sizes, designed by DesignARC. The architects developed simple wood-frame structures that usually featured a double-height living room and double master bedrooms. In one five-unit project, which happens to be located next to the Alexander development (and across the street from a middle school designed by Albert Frei), the houses form an L around a pool protected from prevailing winds by high walls. The architects composed the houses with slipped planes, à la de Stijl, each painted a color selected from the desert's pale palette of gray, silver, copper, and tan. Collectively, the parts form a varied composition along the street, becoming a handsome suburban ensemble updating the precedents of their distinguished neighbors. The houses sold easily and profitably to a largely gay clientele: The developer had discovered a niche market for Modernist enthusiasts seeking a second home. Since then, Cunningham has engaged the architects to develop several mostly multifamily projects, each of which uniquely fits its site at a density that would make a New Urbanist's heart flutter. All share common roots in Modernist precedent.

Solution

The architects followed their single-family house successes with condominiums at 48@Arenas, begun in 2000 and finished in 2002, built in clusters of eight, three deep on each of two adjacent lots, constructed in two phases.



PHOTOGRAPHY: © BENNY CHAN/FOTOWORKS

Joseph Giovannini is a New York–based critic and architect.

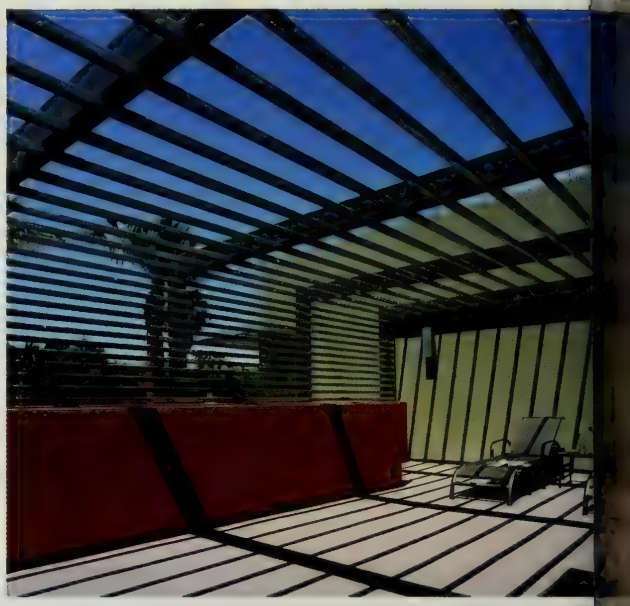


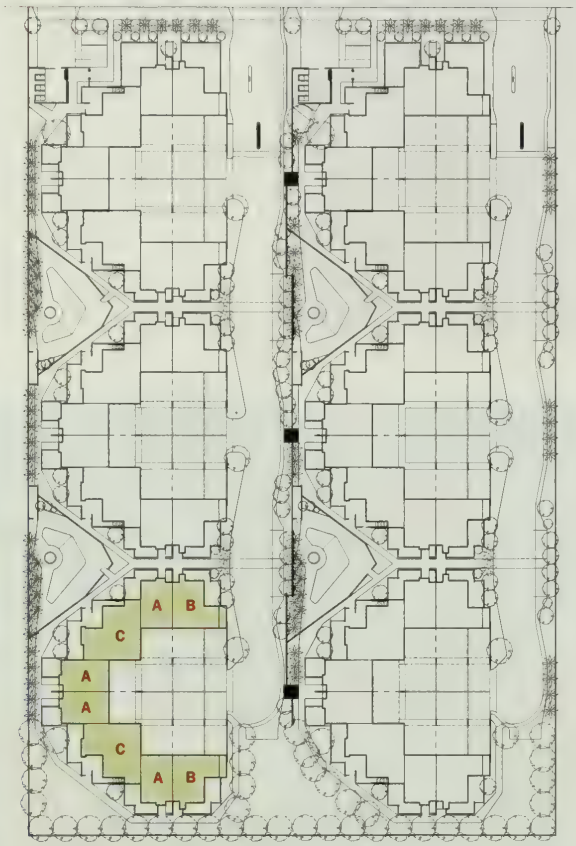


A color palette of gray, silver, copper, and tan contributes to the Modernist aesthetics of these two-story units, built in clusters of eight, at 48@Arenas.



First-floor, double-height public areas receive considerable sunlight from a wall of windows. A glass guardrail and open risers on the stairway enhance transparency (bottom right). Each unit includes a terrace or a yard; metal trellises above the terraces are among the outdoor amenities (right).

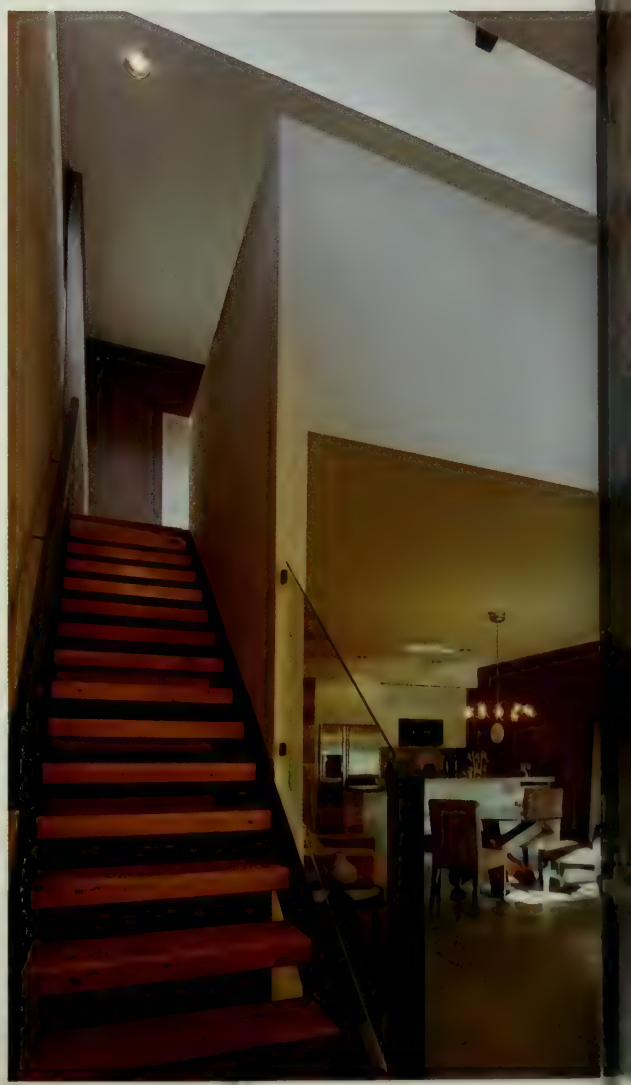


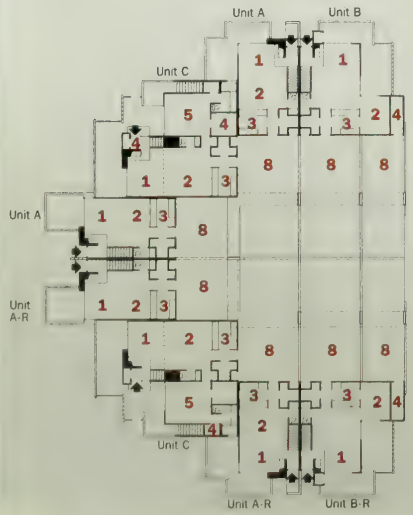


SITE PLAN

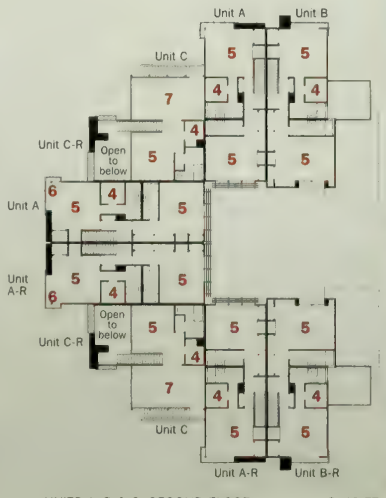
N 0 50 FT. 15 M.

1. *Living room*
2. *Dining room*
3. *Kitchen*
4. *Closet*
5. *Bedroom*
6. *Balcony*
7. *Deck*
8. *Garage*





UNITS A, B & C, FIRST FLOOR



UNITS A, B & C, SECOND FLOOR

0 10 FT. 3 M.

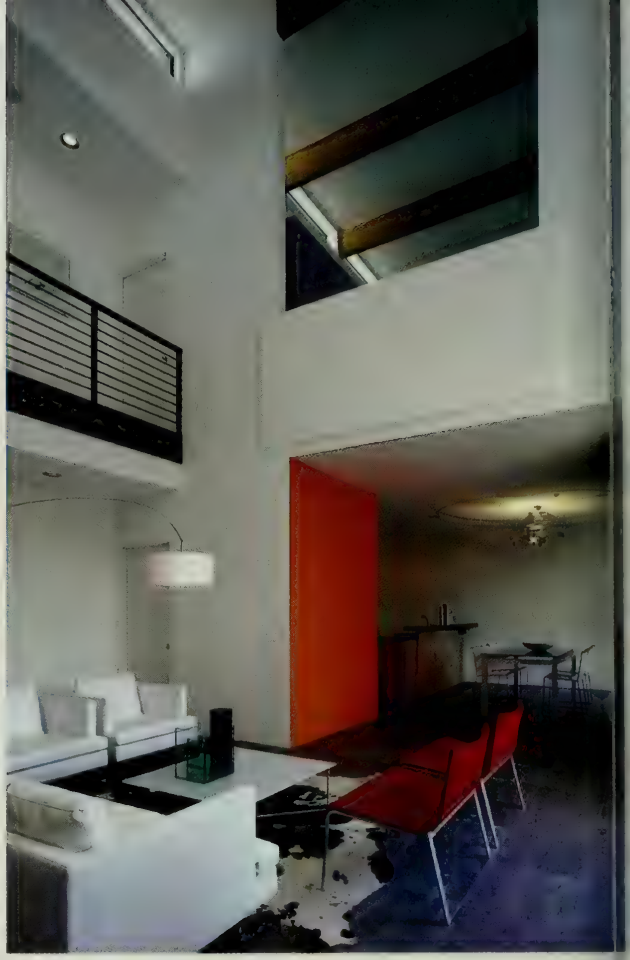


Modern furnishings within the rooms complement the aesthetic of the architecture. All units feature fireplaces and an open-plan living, dining, and kitchen area (this page).

48@BARISTO

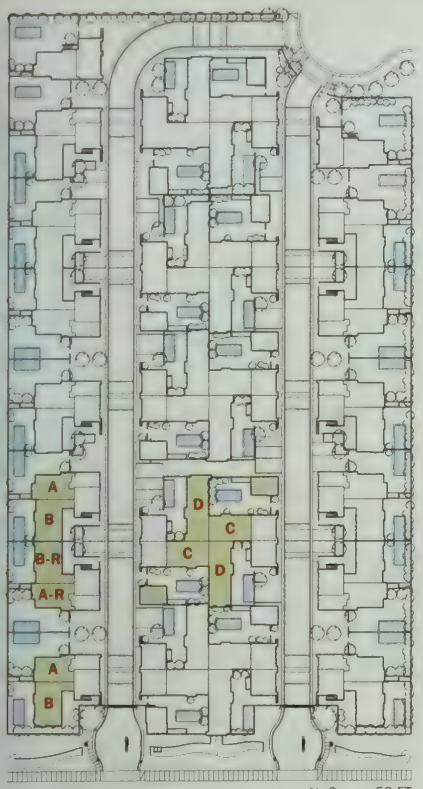
The relationship of the two-story living room to the two bedrooms on the second floor determines the A and B schemes of the project (top right). An outdoor space with a small pool is featured in each unit (bottom right). Throughout the development, the color scheme reflects the surrounding desert and complements the drought-tolerant vegetation (below and bottom left).



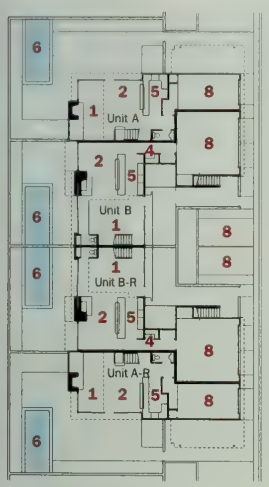






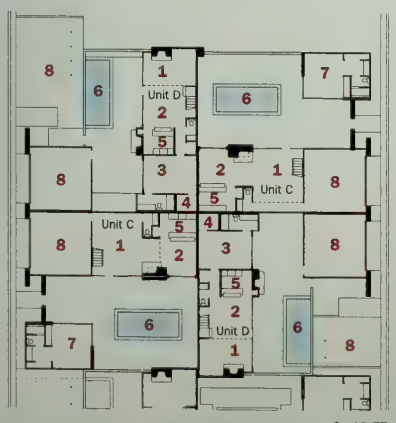


SITE PLAN



UNITS A & B, FIRST FLOOR

1. *Living room*
2. *Dining room*
3. *Bedroom*
4. *Closet*
5. *Kitchen*
6. *Pool*
7. *Guesthouse*
8. *Garage*



UNIT C & D, FIRST FLOOR WITH GUEST HOUSE

The two-story clusters feature double-height living areas within a tightly knotted group of volumes pushed and pulled so that nearly every unit has outdoor space, either in the form of a terrace or yard. The architects affixed metal sunshades over the window and door openings, metal trellises above the terraces, and corrugated metal siding around yards.

The result is a masterly composition of forms rendered in a mixture of colors and materials that gives the impression of complexity. The design recalls Rudolph Schindler's early masterpiece, El Pueblo Ribera courts in San Diego, a tightly packed, highly articulated group of units whose indoor/outdoor relationship survives the density. As at the Ribera courts, the Arenas units blend into a complex spatial puzzle whose power lies in the complexity of an unexpectedly large whole: The cumulative reiteration of forms, spaces, colors, and plans exceeds easy reading. This is a cube for Rubik.

In another project, called 48@Baristo, which began in 2002 and is now being completed, each dwelling resides on its own parcel, yet the development is high density. Every two-story unit embraces an outdoor space with a small pool. Two basic organizational schemes underlie the design of these units—an A and a B defined by the relationship of the double-height living room to the two second-story bedrooms. The architects deftly vary and elaborate the typology throughout the site, cleverly masking the repetition through variation. A "casita" used as a guesthouse is built next to units when leftover space allows.

Commentary

The architects do not use the dense underlying typologies to justify historicized village styles. In fact, they purposefully avoid the tradition of Spanish Colonial buildings, which persistently remains the default local style in Palm Springs and Southern California. "Spanish Revival is the architecture of the colonizers, something that actually happened to the local Indians here," says McCarthy. His partner, Mark Kirkhart, adds, "The Modernist vision was socially inclusionary. It was optimistic, expressing faith in a democratic future instead of an inappropriate display of power and wealth."

What has changed since the earlier Alexander days is that the housing developments are built at a high rather than low density to an urban rather than suburban paradigm. The concept of the house as an object planted in a yard has shifted to the concept of a house virtually built to the lot lines, liberating interior space. The lot has been eliminated in favor of a building wrapped around central outdoor space. The architects adapt the abstract forms into highly negotiable cubic masses that allow great formal, environmental, and programmatic flexibility.

For about 20 years after World War II, Palm Springs became an exclusive playground for Angelenos seeking R & R in secluded privacy. When the Rat Pack and other Hollywood types decamped to other venues, standards lapsed, and a sorry collection of opportunistic development invaded the city, blighting the cityscape with a checkerboard of blandness and schlock.

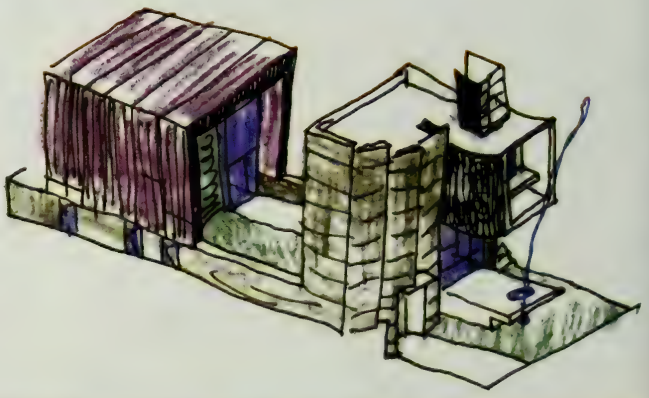
The invasion proved almost terminal for Palm Springs, whose cornerstone as a city was its glamour. But the new developments by DesignARC promise to help reverse the trend. Not only do they satisfy a national market, but they establish cumulatively an armature of architectural quality that gives the city new standards for existing precedents. As a body of work, these designs raise the bar, promising to renew and refresh the city, especially in the more commercial precincts outside the exclusive single-family enclaves. Ironically, the projects are, in a sense, historic restorations. They are helping to re-create a collective urban spirit, one that had recently threatened to become extinct. ■

Orange Grove
West Hollywood, California

3

PUGH + SCARPA CREATES A MODERN LANDMARK IN THE ECLECTIC AND OFTEN UNCONVENTIONAL NEIGHBORHOOD OF WEST HOLLYWOOD.

By Allison Milionis





Architect: *Pugh + Scarpa—Lawrence Scarpa, AIA, principal in charge; Ching Luk, project architect; Angela Brooks, AIA, Silke Clemens, Vanessa Hardy, Gwynne Pugh, AIA, Katrin Terstegen, project team.*
Owner: *Urban Environments*
Engineers: *Oxford Engineering (structural); DonLite Associates (m/e/p)*
Consultants: *Pugh + Scarpa (landscape)*
General contractor: *Becker General Contractors*

Size: *6,700 square feet, housing; 3,800 square feet, parking*
Cost: *$1.25 million*

Sources
Exterior cladding: *JDM Masonry (masonry); Blaney Sheet Metal (curtain wall); Mitchell Construction (concrete)*
Windows: *Milgard Windows*
Glazing: *Triepke Glass (glass); Acralight (skylights); Sunsational Skylights (solatubes)*
Doors: *US Aluminum; Timely; TM Cobb; Fleetwood*
Interior finishes: *Ikea (cabinetry); Shaw Industries (carpet); Dal Tile (tile); Palgard (paint)*
Plumbing: *Toto; Modern Arc*

For more information on this project, go to Building Types Study at **www.architecturalrecord.com**.

"There aren't a lot of bells and whistles," says Los Angeles developer Chris DeBolt of Orange Grove, a 6,700-square-foot complex tucked into a densely populated West Hollywood neighborhood in the heart of the Los Angeles metropolis. "We wanted to allow people to come in and create their own thing." A former developer of commercial properties, DeBolt had a change of heart when he made a rare find in West Hollywood, a vacant lot in a residential neighborhood teeming with eclectic low-rise apartments. Concerned that Los Angeles lacked enough "decent loft space," DeBolt hired Pugh + Scarpa to design a complex to appeal to a growing niche of buyers who seek flexible, open spaces. "I like the work of Richard Neutra and Rudolph Schindler, but I'm not trying to recreate that model," says DeBolt. "I'm interested in applying the minimal elements of Modernism to create urban environments with an edge."

Program

Rising above 1960s- and 1970s-era apartment buildings that face away from the street to shield residents from public gaze, Orange Grove's demonstrative street facade speaks volumes of the evolving notion of urban living in Los Angeles. Two balconies in the front—one completely open, the other shielded by rusted-steel louvers—create a physical and psychological relationship to the street. A steel window box offers an unobstructed view of the private life within.

An extremely tight budget dictated the materials palette, including the structural system—a conventional wood frame that is ideal for a tall, narrow building. The exterior materials include stucco, which speaks to the neighborhood's character, and steel and corrugated metal, which enclose the second-story balconies on the east and north facades. Principal Lawrence Scarpa says the tight budget was not an obstacle. "Good design and a small budget are not mutually exclusive," he explains. "It's a different way of thinking about budget. You have to address it right up front."

Solution

A walkway on the north perimeter of the building accesses the units on the ground floor. All five are on a north/south axis, and each shares

Allison Milionis is a Los Angeles–based writer and a regular contributor to ARCHITECTURAL RECORD.



Located in a neighborhood of traditional bungalow-style single-family residences, Orange Grove displays a distinctive Modernist aesthetic, without overbearing its neighbors.



A floor-to-ceiling garage door and double-height ceilings open up the narrow footprint of the first-floor living-room area of each unit (left).



SECOND FLOOR



GROUND FLOOR

1. *Living room*
2. *Kitchen*
3. *Bedroom*
4. *Balcony*
5. *Courtyard*
6. *Driveway*

common traits with the others, such as a narrow, open floor plan with double-height ceilings, a semi-industrial material palette, simple finishes, and a floor-to-ceiling aluminum-and-glass garage door that opens onto one of two private balconies. In spite of the similarities, the units are distinct, if only in the position of the interior stairway and the location of windows and balconies, which are oriented for maximum solar exposure and privacy.

Kitchen cabinetry and appliances are rather modest, but the adjacent wet room (open shower and bathroom in one) is a sexy little number cordoned off from the main living area by a translucent glass wall and slider. When lit from inside, the room glows like a lantern, while occupants appear as shadowy forms. A single stairway constructed of steel, cable railing, and lacquered 2-by-12-inch wood risers is interrupted by a chipboard landing and mezzanine that serves as a transition area between the ground and second floors. The space is surprisingly functional as a home office, study, or small bedroom; it is illuminated by a skylight located directly above. The second flight of stairs reaches a spacious room that most residents use as a bedroom, with a full bath and balcony.

Scarpa explains that the site's narrow footprint called for height, but it serves another purpose. "Having taller spaces where there is no one living below or above is advantageous to the resident," says Scarpa. "It clearly establishes each person's domain, and I think is easier for people to live in."

Commentary

What's considered "bells and whistles" at Orange Grove is subjective, as several of the new owners can attest. Minimal only in terms of material palette and details, residents have found that openness and natural light are valuable amenities. Believe it or not, these attributes aren't easy to find in L.A. "I looked at hundreds of properties before I found this," says Daryl Buford, a sports attorney and new owner of one of the units. "I know the housing market really well, and there is nothing out there like this." ■



A stairway with open wood risers traverses the living-room space, pauses at a mezzanine level, then continues to the second floor.

The Titan
San Diego, California

4

JONATHAN SEGAL ARCHITECT USES AN ARTFUL MIX OF MATERIALS, SOLIDS, AND VOIDS TO ANIMATE THIS MULTIFAMILY HOUSING PROJECT.

By Ann Jarmusch

Architect: *Jonathan Segal Architect—Jonathan Segal, FAIA, Wendy Segal, Guillermo Tomaszewski, Sebastian Mariscal, Nancy Bokoveen*
Owner: *Jonathan Segal*
Engineer: *Omar Mobayed*

Size: *28,000 square feet*
Cost: *$2.4 million*

Sources
Exterior cladding: *US Aluminum*
Roofing: *Mansville*
Windows: *US Aluminum*
Glazing: *Bristolite (skylights)*
Metal doors: *Timely Frames*
Locksets: *Kwikset*
Exterior: *Expo (stucco)*

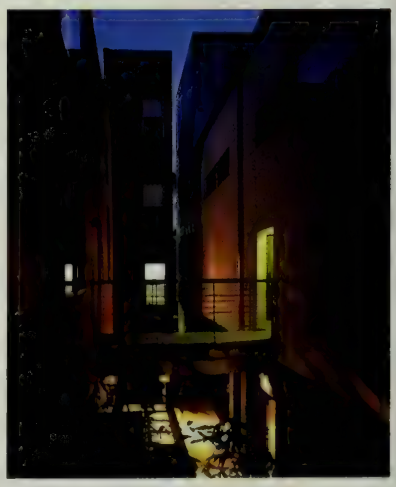
For more information on this project, go to Building Types Study at **www.architecturalrecord.com.**

For more than a dozen years, Jonathan Segal has bought parcels in downtown San Diego's redevelopment areas that others dismissed as either poorly located or oddly shaped. An architect, developer, and builder, Segal accurately predicted San Diegans' ripening attraction to dense urban living. He and his wife and business partner, Wendy, correctly assumed a revitalized downtown would attract people looking for distinctively designed row houses and lofts that engage the street. Segal designed and built a series of flexible live-work dwellings on what were then downtown's fringes [RECORD, January 2003, page 180, and March 1999, page 91].

Program

Segal's latest project, The Titan, stands opposite the roaring San Diego Freeway (Interstate 5) and between two contrasting buildings. One is a demure old residential structure with a stepped parapet, cornice, and double-hung windows. An assertive assemblage of rental lofts surmounted by private towers designed and built by Smith and Others, a small but influential San Diego firm, flanks The Titan's other side. Segal chose his building's name partly to match the power of its neighbor, The Essex, which Ted Smith named for, and modeled after, an aircraft carrier.





Segal saw a need for rental housing on the edge of Little Italy, a small, walkable downtown neighborhood between the freeway and San Diego Bay that because of its character and location attracted redevelopment at lightning speed. New condominium towers and full-block housing complexes now crowd around its low-rise main street, which is lined with Italian restaurants, small businesses, and trendy new shops.

Two forces unfamiliar to Segal helped shape The Titan and sent him in a new design direction. First, land prices in the popular neighborhood were rising rapidly. Developers who had expected rents would rise sharply due to San Diego's affordable-housing crunch instead gained only small increases. With interest rates low, renters who could afford to buy a home jumped at condos in such numbers that downtown developers nearly stopped building new apartments.

Ann Jarmusch is the architecture critic at The San Diego Union-Tribune.



The buildings' syncopated facades—one a soaring, slim vertical composition; the other, horizontal and heavy with rusted steel and a black base—contain different housing options with contrasting apertures that frame city views (this page and opposite, top). A narrow alley between these two volumes leads to a small communal courtyard (opposite, bottom).







THIRD FLOOR



SECOND FLOOR

0 10 FT.
3 M.

Natural light floods the units that face east and the roaring San Diego Freeway. They overlook the urban scene from behind laminated glass (above right). The units around the back face west (above left), where they are poised to capture ocean breezes.

1. *Living room*
2. *Dining/kitchen*
3. *Bedroom*

Segal's financing of The Titan as rental housing depended on his keeping construction costs in check. "We had the absolute tightest budget we've ever worked with: $86 per square foot," Segal said.

Second, he had become enamored of the late-20th-century sculpture of Donald Judd and painting of Richard Diebenkorn. Both artists explored geometry, whether in Judd's precise steel boxes or Diebenkorn's veiled views of Ocean Park, in Santa Monica, as a means of ordering space, form, and perception. Segal aimed to translate aspects of their art into a public facade with "scale and rhythm to dance down the street."

Solution

To reinforce the human scale of The Titan's city block and invigorate the streetscape, Segal designed it to appear as two discrete buildings of contrasting geometries, scale, materials, and color. In a bold move, he clad the front of the larger facade in rusted, mild steel, which he calls "natural art." Stucco walls, which dominate the exterior, offset the steel's high cost. In contrast to this "heavy metal" horizontal box, the narrower, largely transparent glass-and-stucco companion facade shoots skyward and ends up taller.

A slender walkway leads from the street to an interior courtyard that unites the companion facades. This courtyard, which is hidden from the street, forms a social crossroads, where residents collect their mail and head home or out into the city.

To slice costs and maximize the space in The Titan's 22 units, Segal eliminated elevators and traditional fire-stair towers, underground parking, and double-loaded corridors. Reached by private entrances on the street or via short, open-air stairways shared by no more than two other units, the apartments are stacked and interlocked, like a Rubik's Cube.

Ranging from 450 square feet to 950 square feet, each unit is designed to feel bigger than it is, thanks to a double-height living area, sleeping loft, and generous amounts of natural light. Windows come in two sizes—large and enormous—some fashioned from ordinary sliding-glass doors, others made with laminated glass to muffle freeway noise. Most units connect with the outdoors via a private patio or balcony, and one boasts a bridge as its sole entry point.

The steel-clad section wraps around a street-level parking court with only 13 spaces. It doubles as a light well for some units and, Segal maintains, offers residents more safety than a garage because the court is highly visible and easily monitored.

Commentary

The Titan is a strikingly sophisticated addition to a fast-changing neighborhood, and a distinctive place to call home. Its street facade is as artfully composed as a painting, as sensuous as a mixed-media sculpture. Surprises lie within its colorful courts, quirky stairways, and airy, irregular units. As refined as The Titan may be in itself, its facade also complements its two neighbors, playing off of their horizontal and vertical elements, graduated rooflines, and personalities. ■


Inspired by Light
www.seegreatshapes.com
The Oval Serie
Lumec Head Office
640 Curé-Boivin blvd
Boisbriand (Québec)
J7G 2A7 Canada
T.: 450.430.7040
F.: 450.430.1453
www.lumec.com
A Genlyte Company
LUMEC
CIRCLE 56 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL RAILING SYSTEMS

ALL ARCHITECTURAL SYSTEMS DESIGNED, ENGINEERED AND MANUFACTURED BY C.R. LAURENCE

HAND RAILS, GUARD RAILS, WINDSCREENS AND MORE..

STRUCTURAL GLASS RAILING SYSTEM

Perfect for projects where clear viewing and a sophisticated appearance are desired. Glass Railings also serve as an effective wind barrier, combining practicality and pleasing aesthetics to create an ideal outdoor balcony environment.

ARS ALUMINUM RAILING SYSTEM

Available in many configurations, these impact resistant extruded aluminum railings feature high structural durability and are specially coated to resist the corrosive effects of the elements and salt water.

AWS WINDSCREEN SYSTEM

Popular in hotel and condo applications, CRL Glass Pool Surrounds and Windscreens create an effective barrier against wind and sound, without creating the confining feel of a typical fence.

COMMERCIAL AND RESIDENTIAL

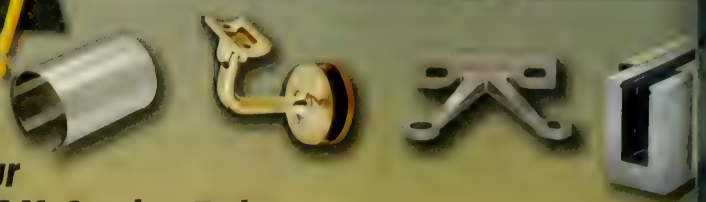




JAB169-6/05



NEW!



Ask for Your Free CD-ROM Catalog Today

The new HR06 Railing Systems Catalog features hundreds of new structural glass products from CRL. See full color pages on our aluminum railings, post railings, hand and guard rails, windscreens, patio posts and more. Also see our new lighting systems, plus valuable technical information. You can view HR06 online at **crlaurence.com.**

CIRCLE 57 ON READER SERVICE CARD OR
TO ARCHRECORD.CONSTRUCTION.COM/PRODU

CRL®

ISO 9001:2000 Cert
crlaurence.co

C.R. LAURENCE COMPAN

Architectural Products Manufacturing Divis
Phone: (800) 421-6144 • Fax: (800) 587-7

CONCRETE THINKER DOUG FARR

"SUSTAINABLE DESIGN IS A NECESSITY. ARCHITECTS MAKE IT A REALITY."



BUILDING FOR COMMUNITIES
Doug Farr thrives on the challenge of designing buildings and communities that integrate materials effectively to maximize human and natural benefits, creating healthy and vibrant places to live and work.

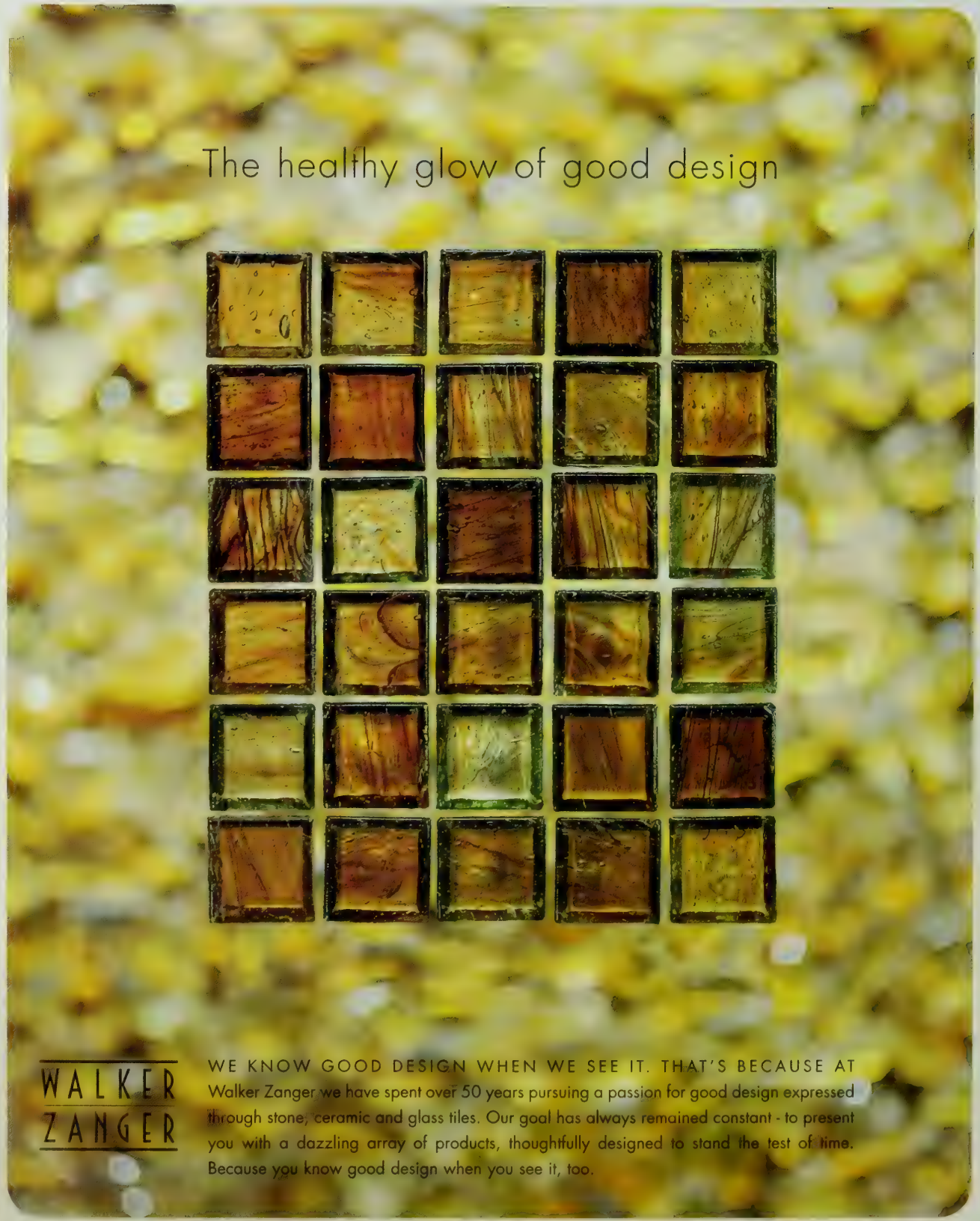
CONCRETE IS A SIGNIFICANT PART OF THE PLAN
Sanctuary Place, a permanent supportive residence for once-homeless women and their children, relies on concrete and concrete masonry to create an effective thermal envelope, reduce sound transmission between apartments, and provide a durable, safe, and healthy living place. The concrete incorporates recycled materials, enhances daylighting, and provides low-maintenance finishes.

Join Doug and other Concrete Thinkers who are creating their legacies with sustainably developed buildings by relying on the durability, versatility, and energy efficiency of concrete. For more information, visit **WWW.CONCRETETHINKER.COM**

Concrete Thinking for a sustainable world

PCA Portland Cement Association

CIRCLE 119 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 58 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

The Pick of the Sustainable Crop

THROUGH ITS ANNUAL AWARDS PROGRAM, AIA'S COMMITTEE ON THE ENVIRONMENT APPLAUDS WELL-DESIGNED, HIGH-PERFORMANCE BUILDINGS THAT REFLECT DIVERSE PLACES AND PURPOSES

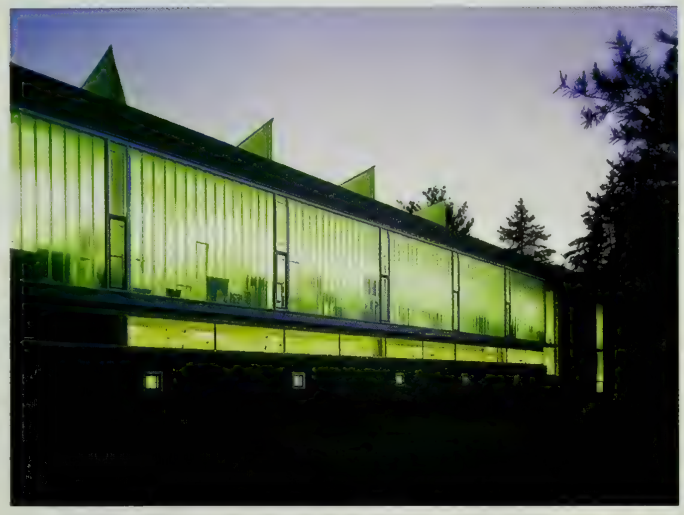
By Nancy B. Solomon, AIA

For the ninth year in a row, the AIA's Committee on the Environment (COTE) celebrated Earth Day by announcing the winners of its 2005 Top Ten Green Projects awards program. This year's recipients, which hail from disparate regions of the country, clearly illustrate that sustainable design can take many forms.

Two of the winners, for example, were adaptive-reuse projects: an interpretive center on a nature preserve in rural Pennsylvania (The Barn at Fallingwater by Bohlin Cywinski Jackson) and a glass foundry in a once-decaying urban neighborhood (Pittsburgh Glass Center by Davis Gardner Gannon Pope Architecture and Bruce Lindsey, AIA). Another was an unusual building type—a homeless shelter—within a central business district (Austin Resource Center for the Homeless, Austin, Texas, by LZT Architects).

According to juror Henry Siegel, FAIA, of Siegel & Strain Architects in Emeryville, California, "We went out of our way to look for buildings that are more urban or address atypical programs. We want to see diversity in this award, not just campus buildings and nature centers." While a plus, an unusual building type is not enough to earn top recognition in this program. COTE Top Ten buildings must demonstrate both good design and good performance. In fact, explains Mark Rylander, AIA, associate partner at William McDonough + Partners in Charlottesville, Virginia, and past chair of COTE, "You can have stellar metrics but not win an award if the jurors don't find the design compelling."

Regular RECORD *contributor Nancy B. Solomon, AIA, writes about building technology, sustainability, and construction innovation.*



COTE-award-winner Polshek Partnership lessened the impact of the visual arts center at Sarah Lawrence College by placing one third of it underground.

But once aesthetics are satisfied, the really hard work begins. In addition to the typical package of drawings and photography submitted to more conventional design awards, the project teams must provide documentation that describes and supports the project's performance characteristics within the 10 measures, or categories, that underlie COTE's definition of sustainable design: land use, site ecology, community design and connection, water use, energy performance, energy security, materials and construction, light and air, bioclimatic design, and long life,loose fit.

Although all the winners seem to address the 10 measures to some degree, different aspects of sustainability are pursued more rigorously from one to the other, depending on localized opportunities and constraints. Of the three winners highlighted below, for example, University of Florida's Rinker Hall, in Gainesville, basks in daylighting; the Austin shelter flouts innovative materials and a visually striking storm-water runoff system; and the Pittsburgh glass studio keeps its cool—in the face of blistering heat—with convection-induced airflows. Rylander underscores the fact that sustainable design does not lend itself to universal solutions, but rather to the key environmental issues of a unique place. "COTE is really interested in understanding how these projects begin to express what it means to build in a particular region," he adds.

There were some surprises in this year's contest. First, there were only eight announced award recipients rather then the typical 10, due not to a dearth of good projects but to a technical glitch relating to the application of new eligibility requirements that was uncovered only after the jury had made its final selections. Also unexpected, the jurors decided to offer a special commendation to Lloyd Crossing Sustainable Urban Design Plan by Mithun of Seattle. Its guidelines suggest ways to increase the density, within an environmentally sustainable framework, of a 35-block inner-city commercial neighborhood in Portland, Oregon. Lloyd

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, *turn to page 160 and follow the instructions.* *Other opportunities to receive Continuing Education credits in this issue can be found on page 167.*

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Describe unique sustainability characteristics in the case studies.*
2. *Explain what the COTE jurors are looking for in submissions.*
3. *Discuss why innovative approaches were used to address specific requirements in these projects.*

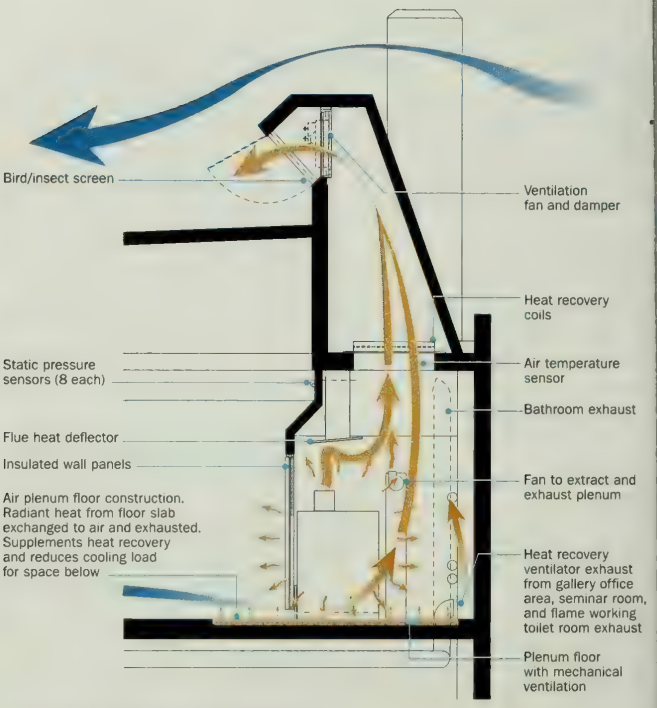
For this story and more continuing education, as well as links to sources, white papers, and products, go to **www.architecturalrecord.com**.





Pittsburgh Glass Center, Pittsburgh, Pennsylvania

This 17,600-square-foot adaptive-reuse project (left) by DGGP and Bruce Lindsey, AIA, relies to a great extent on a natural ventilation system triggered by the glass furnaces in the hot shop (opposite). Garage doors function as operable windows on the addition's second-floor to provide fresh air (bottom left). First-floor offices and gallery are fully conditioned (opposite bottom). Heat from the glass-making equipment is recovered (below).



SECTION SHOWING HEAT RECOVERY SYSTEM

Crossing was not eligible for a Top Ten award because, as a plan rather than a built work, it could not be reviewed for the 10 performance metrics. Nonetheless, says juror Siegel, "We wanted to applaud the effort." The commendation reflects an increased desire on the part of COTE "to bring sustainability to the community level," he adds.

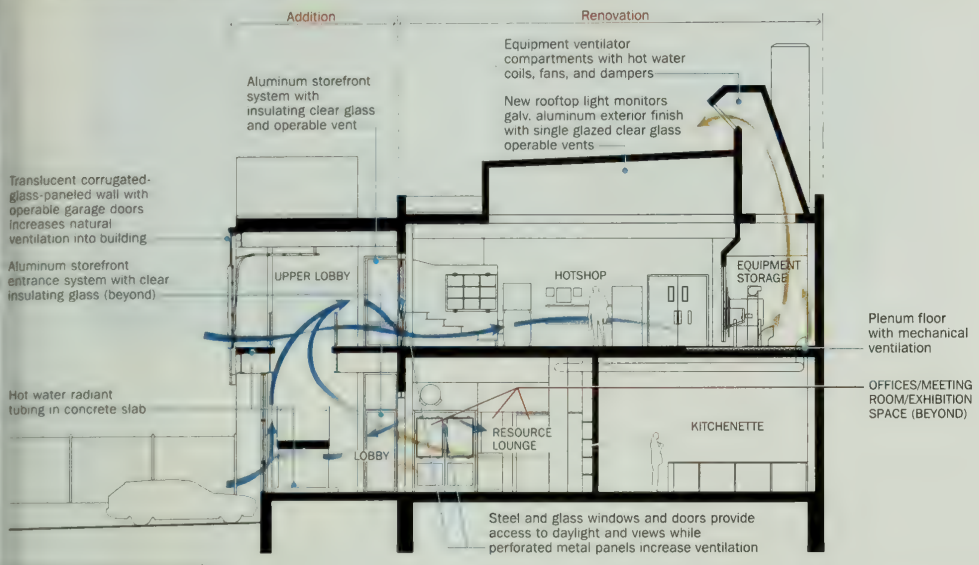
Pittsburgh Glass Center

Before steel was king, Pittsburgh was a hub for glass making. The city was perfect for the industry, explains Kevin Gannon, AIA, a principal of the local firm Davis Gardner Gannon Pope Architecture (DGGP): "Coal tumbling down the mountains served as fuel to melt the sand dredged from the rivers below." But once steel soared, most of the art-glass foundries foundered. Now that the steel mills too have gone by the wayside, it seems only fitting that, in an effort to revitalize one of the city's historic neighborhoods, the Urban Redevelopment Authority of Pittsburgh supported the building of a facility to promote the art of glass making. The 17,600-square-foot adaptive reuse project was completed in January 2002.

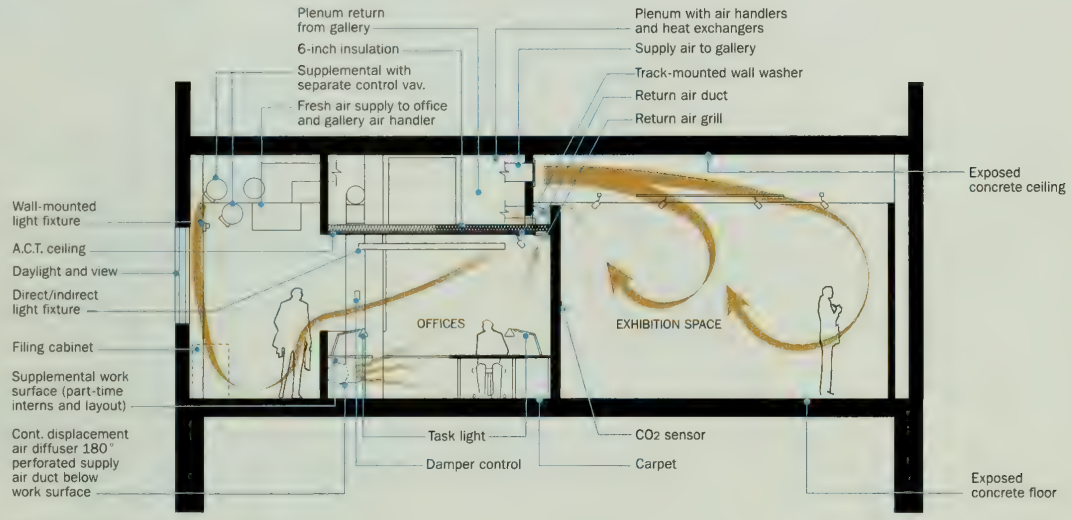
With funding from sustainable-minded organizations such as the Heinz Endowments and the Richard King Mellon Foundation, the nonprofit Pittsburgh Glass Center insisted on a green building from the start. The decision to adapt a vacant two-story structure and adjacent lot on an urban site with good access to public transportation was one of the project's earliest eco-friendly moves, even before the architectural team was brought on board. DGGP designed the center in collaboration with Bruce Lindsey, AIA, currently head of the School of Architecture at Auburn University in Alabama.

The design team added a two-story, steel-framed entry along the original east wall. Its first floor is sheathed with aluminum-framed clear glass and its second with salvaged translucent-corrugated-glass panels and aluminum battens. This public zone looks out onto a landscaped pervious courtyard paved with crushed limestone that doubles as a parking lot. From this entry, one can access the new program spaces located within the shell of the old brick building: flameworking studio, seminar room, exhibition space, and offices on the first floor; hot, technical, casting, and coldworking shops on the second floor.

The glass-making process centers on the hot shop, where two 1,000-pound glass furnaces, eight glory holes, and several electric annealers line up along the west wall. Turning a problem into an opportunity,



SECTION SHOWING VENTILATION



SECTION THROUGH OFFICES AND GALLERY

the architects took advantage of this heat-intensive equipment to create a mechanical system for the building that is as energy efficient as possible.

Relying largely on convection, the architects use the heat of the glass furnaces to activate a natural ventilation system throughout most of the building. Extending beyond the roofline above the zone of equipment is a 100-foot-long hood assembly. It is segmented so that each compartment functions as a distinct vertical flue through which heat rises. Openings at the top are oriented so that the exhaust from the building will flow out in sync with the region's prevailing wind currents. Ventilation fans at the top of the hoods are activated as needed by sensors to supplement the convective exhaust system.

The stale air exiting the hot-shop chimneys draws replacement air from unconditioned spaces on the first and second floors. These areas, in turn, pull fresh air from the outdoors via a variety of operable windows and vents. To permit this uninhibited flow of air through multiple spaces in a mixed-use building, the architects needed a building variance that would allow them to treat much of the building as an atriumlike space. The design team had to provide a sufficient number of sprinkler heads, specify fire-alarm sensors, and develop equipment-shut-off protocols, for example, in order to forego fire dampers, ducted return systems, and 2-hour-rated doors and partitions at critical transition points.

There were some exceptions to this unimpeded flow of air. Certain areas were mechanically isolated either because the activities they supported, such as welding, plaster-mold making, and sandblasting, generated unhealthy particulates or because they needed to be more fully conditioned to meet standard expectations, such as the offices, classrooms, and gallery. For additional energy savings, heat-recovery coils were installed within the hood assembly to transfer all waste heat to a liquid medium that is then circulated to radiant floors and air-handlers in other parts of the center.

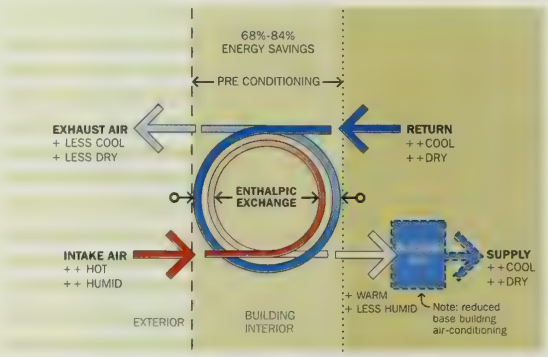
Rinker Hall

As architectural commissions go, Rinker Hall in Gainesville, Florida, represents both the extraordinary and the ordinary: extraordinary because the building is the new home of the M.E. Rinker, Sr., School of Building Construction, a department of the University of Florida's College of Design and Construction, so the client and stakeholders were themselves well-versed in the art and science of place making; ordinary because, as is

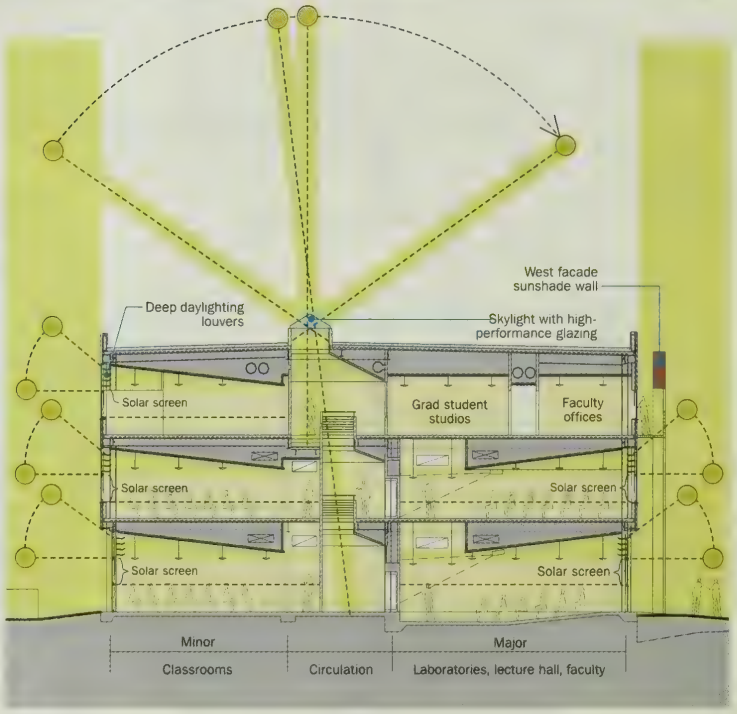


Rinker Hall, Gainesville, Florida

Croxton Collaborative Architects + Gould Evans Associates oriented the University of Florida's School of Building Construction on a north-south axis to capture low-angle light (below right). A brick-walled outdoor area (right) serves as a construction yard. An enthalpy wheel filled with dessicant crystals rotates between intake and exhaust-air flows to transfer heat and moisture from the incoming stream to the outgoing one, reducing the building's operational costs (below).



ENTHALPY WHEEL EFFECT SHOWN AT DOMINANT TROPICAL CLIMATE CONDITION



EAST-WEST SECTION

0 10 FT.
3 M.

typical of a project for a public university, its funding was limited. The client and architectural team demonstrated that, by working closely and thoughtfully together from the start, an attractive, high-performance design could be delivered within a standard schedule and a no-frills budget. Completed in March 2003 for a mere $137.50 per square foot, Rinker Hall received a LEED rating of gold in 2004.

"It was an exercise in resourceful design," says Randolph R. Croxton, FAIA, of Croxton Collaborative Architects in New York, which undertook the project through a joint venture with Gould Evans Associates, a firm with offices in seven locations, including Kansas City, Missouri. "It's almost a bare-bones, reductionist building," suggests Croxton, "yet it has an inherent richness that won't diminish over time, because its panache comes from nature rather than from very expensive, capital-intensive gestures."

Reflecting the belief that sustainable design embodies not only environmental concerns, but social and economic ones as well, the design team chose to orient the building along a north-south axis out of respect for existing landmarks, and to use patterns identified during a three-day site-planning charrette with students, faculty, and staff. It was determined, for example, that the main entrance to Rinker Hall should front Newell Drive, which runs along the west boundary of the site, because the road leads north to the heart of the campus. In addition, participants wanted to preserve an open commons area to the northeast, a footpath along the southern edge, views north to the university's memorial tower from two dormitories south of the site, and several hundred-year-old specimen oaks.

A north-south axis in this part of the hemisphere flies in the face of conventional, passive-solar design, which teaches that a rectangular building should run along an east-west axis so that its long elevations will face north and south. At the latitude of Gainesville, this configuration minimizes thermal exposure to the hot summer sun but also limits daylighting opportunities.

Although Croxton agrees that the east-west axis made sense when passive solar design was in its infancy, he argues that technological advances over the years—specifically, high-performance glazing that lets in the visible light spectrum while filtering out hotter infrared rays, plus continuously operating light sensors and dimming ballasts that minimize energy usage when daylighting is plentiful—has changed all this. His

Ava Knight



By day-
Up-and-Coming
Driven Designer

...But when projects are going astray or designs are void of style, she becomes...

CIRCLE 59 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

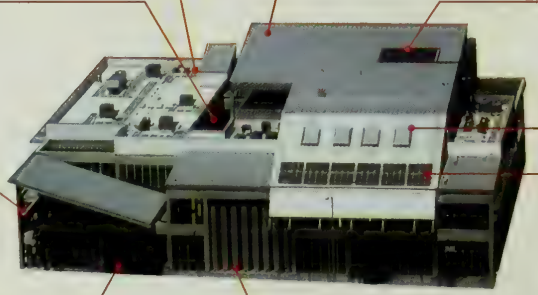




Austin Resource Center for the Homeless (ARCH), Austin, Texas

This 26,800-square-foot municipal building (top) by LZT Architects exhibits numerous sustainable strategies (below right). For example, a 13,000-gallon rainwater-collection system (below) helps to minimize local flooding concerns. A "stack-cast tilt-frame" structural system (right) reduces the amount of formwork required while increasing the quality of the concrete finish, thereby reducing the total amount of materials needed for the job.





GREEN FEATURES

research—through previous projects and computer modeling—suggests that, when designed correctly, a building oriented along the north-south axis can actually benefit, in terms of both energy efficiency and indoor environmental quality, from its more abundant and varied daylighting.

The organization of the 47,300-square-foot building is straightforward: The main entrance near the center of the west facade leads to a central, skylit circulation spine that runs north-south. On a sunny day, a beam of light cascades down the atrium's open staircases to mark solar noon. The brightly lit vertical space is flanked on both sides by classrooms, laboratories, staff offices, and student facilities. Multiple bridges on the second and third floors connect the two sides.

Because of the orientation, daylight control is highly sophisticated. On the east and west facades, the architects specified large exterior windows with spectrally selective glazing to admit abundant visible light while blocking solar heat gain. Interior solar screens installed just above eye level can reduce light transmission by 97 percent when deployed.

Above the solar screen is a system of extruded aluminum louvers that bounce light toward a sloping ceiling. The carefully crafted geometry allows daylight to penetrate significantly deeper into the building for longer periods of time than would be possible in a similarly proportioned building oriented east-west at the same latitude.

Coupled with artificial lighting that is controlled by photosensors and dimming ballasts, this careful manipulation of natural light saves a significant amount of energy by greatly reducing the need for electrical illumination. But Croxton argues that the benefits go far beyond the simple economics: "The power of the building is that you can live a day in nature." Occupants on either side of the building enjoy half a day with abundant diffused light—the most ideal form of illumination—and half a day with the delightful variations in light conditions that occur as the sun traverses the sky between zenith and horizon. Connecting to the latter—nature's own circadian rhythm—allows occupants to experience what Croxton describes as "the most primitive, deep-seated aspects of comfort."

Austin Resource Center for the Homeless

Completed in April 2004, the 26,800-square-foot Austin Resource Center for the Homeless provides both temporary shelter and long-term support programs for the indigent on the site of a former gas station in the heart of Austin, Texas. The city-run facility, designed by the local firm

Avonita

Designer Superhero





episode 1

Escape from blah color hell

Ava Knight discovers a plot to whitewash her inspired design for a pediatric oncology recovery village. Will the sinister GC Vick water down the client's vision?

To see the exciting conclusion and learn more about our superhero, visit www.avonita.com

CIRCLE 60 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

LZT Architects, includes a double-height lobby, health clinic, laundry facilities, locker room, and computer room on the first floor; kitchen, dining room, meeting rooms, showers, sick room, and administrative offices on the second floor; and sleeping quarters, restrooms, and an outdoor terrace at the top. The building's exposed structural system, a series of parallel concrete frames braced perpendicularly with concrete beams, affords spatial orientation, multiple visual connections, and abundant daylight—qualities that offer much-needed comfort, security, and hope to an underprivileged population.

During the predesign phase, Austin's city council approved an ordinance requiring that the design of any new municipal building follow the guidelines developed by the U.S. Green Building Council for its LEED rating system. "We were very excited about that," says project architect Murray Legge, AIA, "because it gave the client a set of helpful parameters." It also gave the design team an opportunity to engage local environmental building consultant Gail Vittori of the Center for Maximum Potential Building Systems.

The team was particularly resourceful in their approach to material selection and water management. The structure, for example, relies on an innovative process dubbed "stack-cast tilt-frame." Traditional cast-in-place concrete is expensive (because of the extensive amount of formwork required) and difficult to finish properly, so structural engineer David Powell of the local firm P.E. Structural Consultants proposed instead that the 12-inch-thick concrete frames be cast on the ground—one on top of the other like a stack of pancakes—with reusable forms, and then lifted into place with a crane. This approach allowed the contractor to easily and efficiently pour and agitate the concrete mix so that it would flow into all corners of the mold, resulting in a clean, attractive finish at a reasonable cost. Because the surface was of such high quality, the structural elements could remain exposed on both the exterior and interior, thus reducing the total amount of finishing materials required for the building. Overall, Legge was pleased with this construction technique, but he would prefer a larger area next time: "Staging was difficult because we had a tiny little site in which to lay the pieces out."

To make the concrete assembly even more environmentally friendly, the architects requested that fly ash—a by-product of coal-fired electrical generation—be substituted for 45 percent of the portland cement, the production of which releases significant amounts of carbon dioxide into the atmosphere each year. Fly ash is stronger and, since free for the taking, less expensive than portland cement. It also provides a warm brownish tint. "But it's tricky to work with because it takes longer to set up, forcing the contractor to sit out there and babysit," notes Legge. It is also poorly suited to cold climates, which are subject to frequent freeze-thaw cycles.

Austin suffers from serious flooding problems because it lacks topsoil. To reduce the load on the city's storm-water-management system, LZT developed a 13,000-gallon rainwater-collection system for landscape irrigation and for the flushing of toilets and urinals. Seeing both an architectural and educational opportunity embedded in this highly functional feature, the designers installed, like a row of sentries, eight 21-foot-tall, 24-inch-diameter galvanized-steel tubes within one of the structural frames just east of the front door. In keeping with resource-efficient practices, the water cisterns double as solar-shading devices in front of a south-facing window, creating a diffused, pearly light within the lobby. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "The Pick of the Sustainable Crop" using the learning objectives provided.
- Complete the questions below, then fill in your answers (page 264).
- Fill out and submit the AIA/CES education reporting form (page 264) or download the form at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. Sustainable design lends itself to which type of design issues?
- **a.** universal design issues
- **b.** community design issues
- **c.** unique environmental design issues
- **d.** regional design issues

2. COTE Top Ten buildings must demonstrate which qualities?
- **a.** good performance and good location
- **b.** good design and good performance
- **c.** good design, good performance, and good location
- **d.** good location and good design

3. Which best describes the documentation included with drawings and photography for COTE awards?
- **a.** performance characteristics in 10 categories of sustainable design
- **b.** impact on commercial urban neighborhood
- **c.** calculations of amounts of daylight
- **d.** amount of fly ash contained in the concrete mixture

4. Which was not one of the earliest ecological decisions at Pittsburgh?
- **a.** adapting a vacant two-story structure
- **b.** selecting a site with good access to public transportation
- **c.** using salvaged translucent-corrugated-glass panels
- **d.** selecting an urban site

5. In order for the Pittsburgh Glass Center to draw fresh air through the unconditioned spaces, the design team had to do which?
- **a.** use 2-hour fire doors and partitions
- **b.** use fire dampers
- **c.** use ducted return systems
- **d.** apply for a variance to treat the building as an atriumlike space

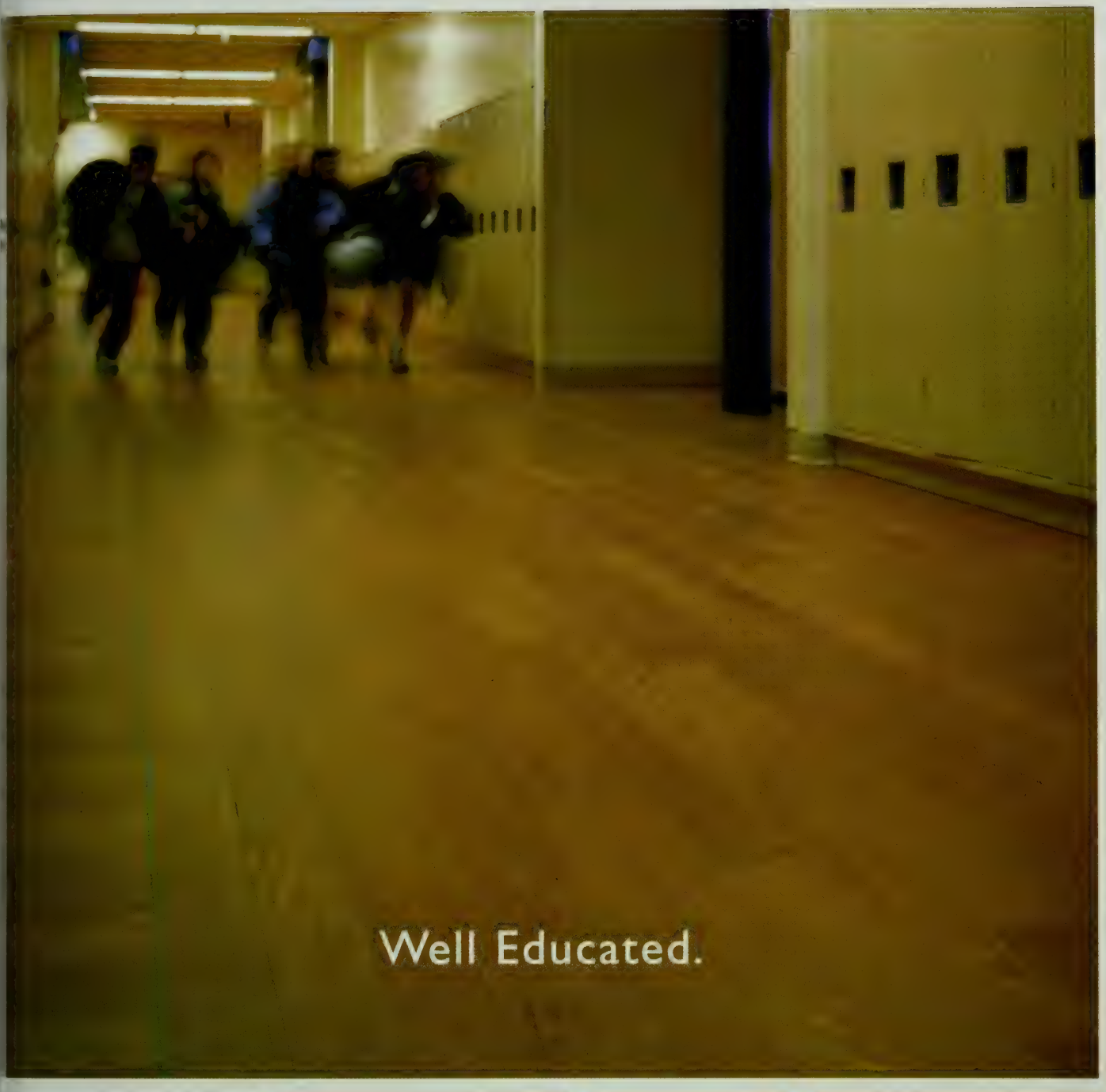
6. Rinker Hall was oriented along a north-south axis for all except which reason?
- **a.** to minimize exposure to the hot summer sun
- **b.** to be respectful of existing landmarks
- **c.** to take advantage of the abundant daylight
- **d.** to keep a view of the memorial tower from two dormitories

7. The Rinker Hall solar screens allow daylight to do which?
- **a.** penetrate deep into the building
- **b.** be reflected out of the building
- **c.** penetrate the perimeter of the building
- **d.** be stored for use at a later time

8. When occupants spend a half day with diffused light and a half day with variations in light conditions, Croxton says this allows them to experience what?
- **a.** a significant amount of energy
- **b.** the most ideal form of illumination
- **c.** the most primitive, deep-seated aspects of comfort
- **d.** natural healing

9. The Austin Resource Center used tilt-frame concrete for which reason?
- **a.** because they had limited space to work
- **b.** in order to reuse one form, saving the expense of many
- **c.** to make the concrete pouring process faster
- **d.** to make the concrete finishing process cleaner, more attractive

10. Fly ash was added to the concrete for all except which reason?
- **a.** to cut down on the carbon dioxide released into the atmosphere
- **b.** less expensive than portland cement
- **c.** fly ash provides a warm brownish tint
- **d.** sets up quicker than portland cement



STRATICA.

FROM AMTICO INTERNATIONAL

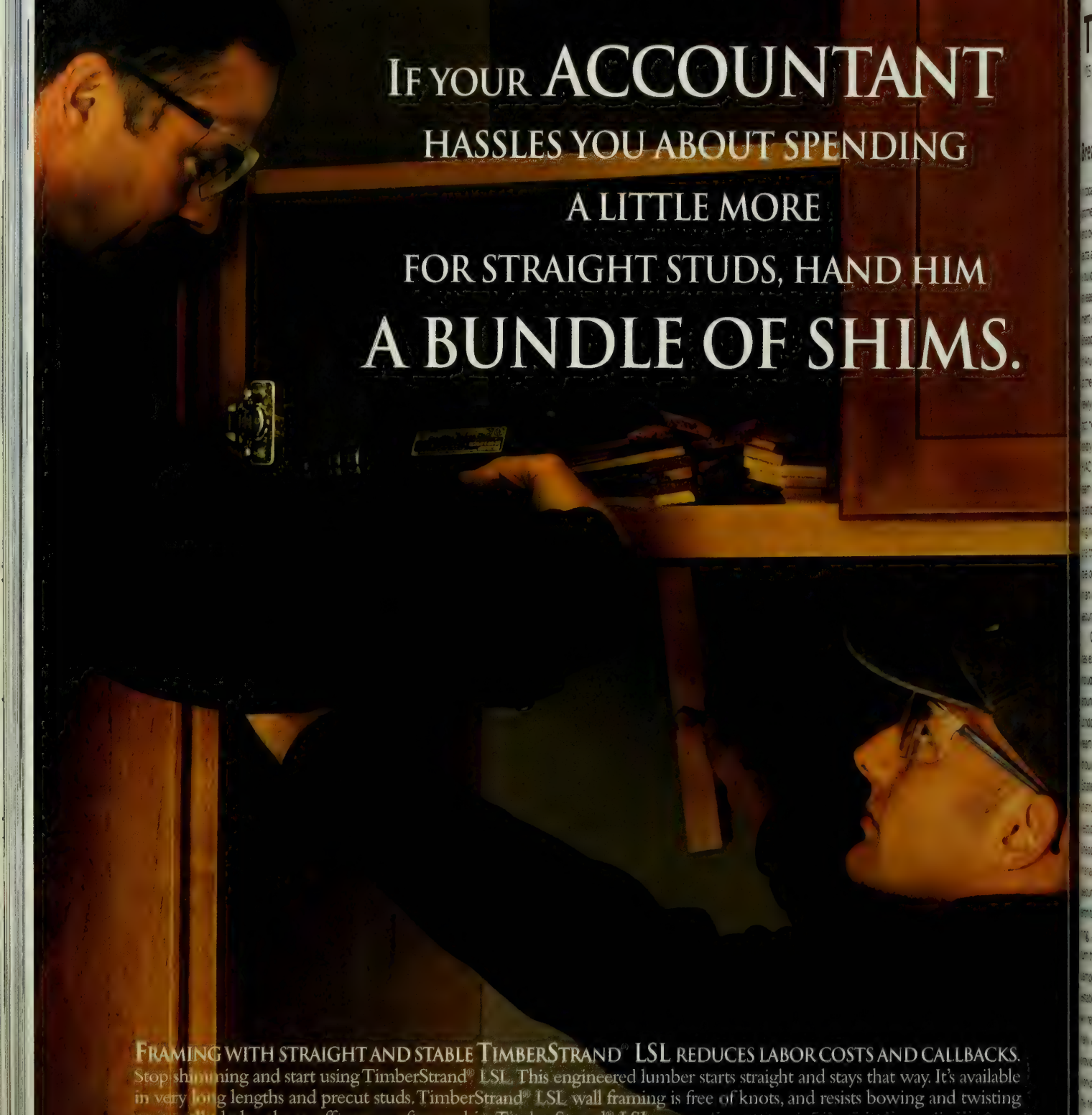
For all the right reasons.

40 years of perfecting flooring for performance intensive environments has taught us a lot. But an education is never really complete, and we're not done yet. We are continually developing better looking, better performing, healthier, and more functional products for demanding environments: **Like education. Like the advanced-engineered Stratica product line.**

- Ecopolymeric,™ PVC and formaldehyde-free
- Virtually VOC-free for improved indoor air quality
- Wax-free for less maintenance and cleaner wastewater
- Dupont Surlyn® wearlayer for superior durability
- Stratica contains post-industrial recycled content

To find out more, call 888 268 4269 or visit www.stratica.com

CIRCLE 61 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



FRAMING WITH STRAIGHT AND STABLE TIMBERSTRAND® LSL REDUCES LABOR COSTS AND CALLBACKS.

Stop shimming and start using TimberStrand® LSL. This engineered lumber starts straight and stays that way. It's available in very long lengths and precut studs. TimberStrand® LSL wall framing is free of knots, and resists bowing and twisting so it really helps show off your craftsmanship. TimberStrand® LSL is at the core of the Zone Framing™ movement, where builders use engineered materials in kitchens, bathrooms and other applications that require flat, stable surfaces. For your nearest Trus Joist dealer, visit www.trusjoist.com or call 1-800-338-0515.

Trus Joist®
A Weyerhaeuser Business

Visit us at: www.trusjoist.com

Copyright ©2002. All rights reserved. ® Trus Joist® and TimberStrand® are registered trademarks and Zone Framing™ is a trademark of Trus Joist, A Weyerhaeuser Business, Boise, Idaho.

CIRCLE 62 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Breathing room: Arup's new London headquarters celebrates its mechanical systems

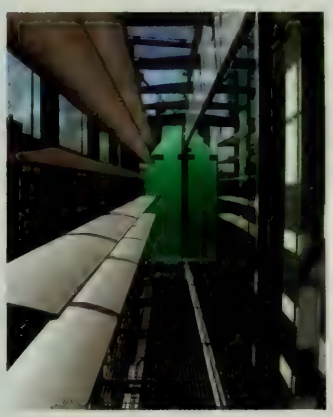
In today's era of sick-building syndrome and fears of SARS outbreaks and bioterrorist attacks, most architects and engineers strive to obscure a building's mechanical systems, or at least place the necessary equipment out of harm's way. But architect Sheppard Robson and the engineers of Arup have done just the opposite at the Fitzrovia Building, the latter's newly designed, 125,000-square-foot headquarters in London, which boldly displays the innards of its HVAC system. In so doing, the design team has created an alluring new relationship between architecture, engineering, and urban space—one that negotiates the complex role of air-handling technologies in an age of environmental and security concerns.

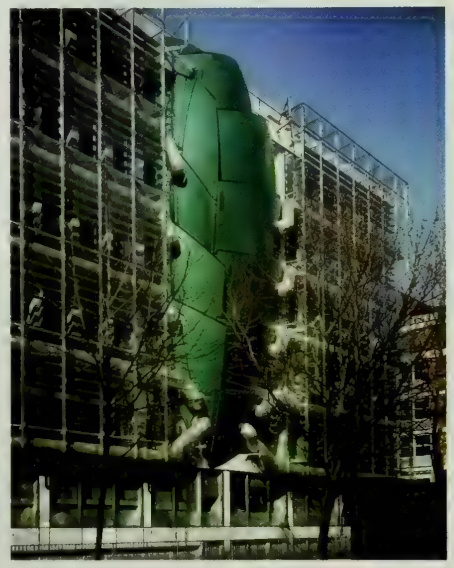
Over the past 50 years, Arup has expanded its operations to include numerous buildings in and around the Fitzroy Street area of London, just north and west of the heart of Bloomsbury. The collection of buildings, dubbed the "Fitzrovia Estate," was a sprawling aggregation of structures with few physical connections. In March 2001, Arup, Sheppard Robson, and real estate management firm London Merchant Securities announced plans to use architecture, small-scale urban planning, and sustainable engineering to turn the collection of buildings into a campus for Arup. "The project will establish a coherent campus that will reflect both externally and internally what Arup stands for. It will provide an exciting and inspirational workplace to support and encourage the firm's philosophy of creativity and innovation," said Arup officials at the project's onset. The Fitzrovia Building is the first step in this plan.

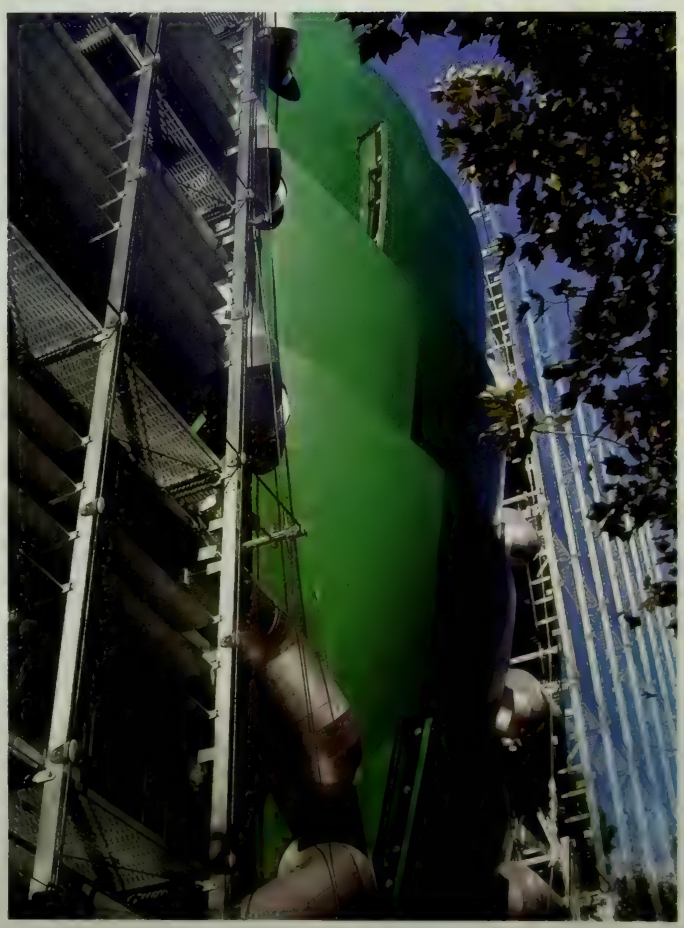
Turning HVAC inside out

Sheppard Robson and Arup used the distribution of air and light as a leitmotif in bringing together two seven-story, 1960s-era office blocks that constitute the new building. It now reads as a unified ensemble, laced together with pronounced ductwork, a dramatic double-glazed curtain wall, and a standout component: a lozenge-shaped element, called "the hub," which forms the locus of a unique air-delivery system for the complex.

In the existing buildings, low floor-to-ceiling heights precluded the use of underfloor air distribution for heating and cooling, an energy-saving strategy that Arup pioneered years ago. Instead, the engineers mounted air-handling ducts on the exterior of the building, in a clearly visible space within the cavity of a double-glazed curtain wall. Solar-shading louvers are also installed between the glazed faces of this curtain wall to reduce heat gain within the complex. The windows facing Fitzroy Street are operable to encourage natural ventilation, whereas those that look out on the warmer, south-facing Howland Street are fixed, and the HVAC ducts in this area more protected in the plenum space between the double glazing. A computerized building management system (BMS) controls the entire operation, maintaining comfortable indoor temperatures while







The HVAC system for Arup's new campus on Fitzroy Street in London is clearly visible through a double-glazed curtain wall (left), with ducts and louvers mounted in the plenum space (far left). The ducts meet in the bright green "hub" (left and below), where air enters and exits.



Arup employees gather informally in "the hub," which was designed to allow air to move efficiently through the building's HVAC system.

also balancing energy consumption. Though the double glazing, louvered shading devices, and BMS are common features in Europe's energy-conscious architecture, this project's brazen display of its HVAC equipment makes it exceptional.

The hub, a mixing chamber and circulation space for both people and incoming air, is clad inside and out with bright-green composite panels manufactured in Germany. The panels splay and peel open haphazardly, distorting the hub's egglike form and providing areas for air entry and exit through the gaps between the panels and into the exterior ductwork. Originally, this part of the building was to be clad in copper panels, but the matte-plastic skin actually harmonizes better with the rest of the building's palette of industrial materials. From outside, the hub appears as a distorted technological element, cracked and warped for the provision of air. Inside, its green skin partially encloses gathering areas for Arup's employees to use as informal breakout and meeting space, as well as for public functions.

As technically proficient as it is visually contemplative, Sheppard Robson and Arup have created at the Fitzrovia Building a compelling essay on air and urbanism. The ducts sealed within the double-glazed wall, along with the fractured geometries of the hub, seem to suggest the uncertain contemporary aesthetics of expressing how building systems work. On the one hand, these systems make buildings habitable and (in the best cases) more comfortable; on the other hand, they can serve as a vector for causing harm to occupants, whether intentionally or not. While a powerful form, the hub invokes a far more hesitant image of this machinery than late-Modernist works such as the 1984 Lloyds Building of London by Richard Rogers, or his earlier Pompidou Center in Paris, completed with Renzo Piano in 1977. Both these buildings were also engineered by Arup, and may have been the "last gasp" (so to speak) of a purely technological building language rooted in Archigramian aesthetics. Today, the architectural expression of these systems faces a far more tentative future, when so much concern has been raised about their gluttonous energy consumption, their vulnerability to attack, and the difficult maintenance and air-quality issues they entail. It's into this unique historical moment that the new Arup headquarters exhales an audible, striking sigh. *David Gissen*



In Berlin, meticulous sitework and off-site production help piece together a sober memorial

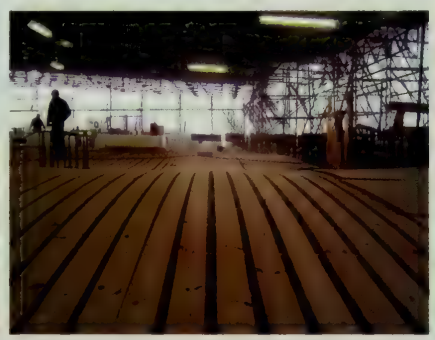
The field of steles (pillars) at Eisenman Architects' Memorial to the Murdered Jews in Europe [page 120], and the rolling terrain and visitors center they sit on, required close coordination of design and engineering issues during construction.

The 2,711 reinforced, self-compacting concrete steles were prefabricated off-site at an average rate of about 60 per week, depending on their size (the shortest are about 1.6 feet tall; the tallest are 15 feet). The design team and the fabricator, Firma Geithner, checked each stele against an approved prototype before authorizing it for shipment to the site. Meanwhile, the 4.7-acre site was filled in and graded to form the memorial's gently undulating topography. A grid plan for the steles was laid down, and the site's soil was then excavated to create individual "terraces" of compacted soil where the steles would sit.

Working with engineers Buro Happold, the design team conceived what are essentially rectangular strip foundations, or footings, to support the steles. Each one is held up by two such footings. Four extra supporting "bumps" fitted with rubber gaskets were added to each footing to accommodate the varying weights and tilt angles of the steles. Installation was completed in December 2004.

As the sitework and stele fabrication progressed, the below-grade visitors center was taking shape. Structurally, it consists of simple retaining walls and concrete columns supporting a poured-in-place concrete coffered ceiling that varies in height as it mimics the rolling topography above. Wood forms were built for the ceiling pour, with wood beams and ribs overlaid by large sheets of plywood to re-create the land form. The construction team used MDF board to hollow out spaces for the 1-foot-deep coffered areas. All the concrete was left uncoated, which contributes to the center's stark ambience. *Deborah Snoonian, P.E.*







Each stele was lowered into place with a crane (left). Formwork for the coffered ceiling (middle) followed the site's lines, and the concrete was left uncoated (right).

• *Web openings allow generous mechanical chases*
• *U/L Fire Ratings up to 3 Hours*
• *Spans up to 43 feet*





HAMBRO®
Proven Concrete Floor System

450 East Hillsboro Blvd
Deerfield Beach, FL 33441
Tel: 800-546-9008 – Fax: 800-592-4943
www.hambro.ws

CIRCLE 63 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

The American Institute of Architects

honor awards 2006



call for entries

architecture
ENTRY DEADLINE: August 5, 2005
SUBMISSION DEADLINE: September 2, 2005

interior architecture
ENTRY DEADLINE: August 19, 2005
SUBMISSION DEADLINE: September 16, 2005

regional & urban design
ENTRY DEADLINE: September 9, 2005
SUBMISSION DEADLINE: October 7, 2005

the twenty-five year award
SUBMISSION DEADLINE: September 2, 2005

For more information, go to
www.aia.org/nationalawards.

Celebrating the best in contemporary American architecture.

AIA

Yale Center for British Art, New Haven, Connecticut; architect: Louis I. Kahn, FAIA; completed by Pellecchia & Meyers; photo by Richard Caspole, courtesy of the Yale Center for British Art

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Section: July 2005

You can earn AIA Continuing Education Learning Units by reading designated articles and sponsored sections in *Architectural Record* and on *Architecturalrecord.com*, and answering test questions following each article. This month's sponsored Continuing Education sections cover a range of architectural and design challenges and innovations and have been approved by AIA for Continuing Education Credit. They are presented by manufacturers and professional organizations who share *Architectural Record*'s strong commitment to serve the educational needs of architects.

For more information, visit www.construction.com/ContinuingEd.

ilence is Golden: Controlling Sound in Non-Residential Structures

Sponsored by Marvin Windows and Doors

EARNING OBJECTIVES:

- Recognize situations that require sound control in non-residential structures
- Understand sound transmission as it relates to occupied buildings
- Identify the appropriate sound rating systems for glass and framing materials used in windows and doors
- List and compare the primary advantages and disadvantages of window and door options





From Quarry to Residential Countertop

Sponsored by Marble Institute of America

LEARNING OBJECTIVES:

- Know basic sequencing of processes for natural stone to go from quarry to countertop
- Learn elements that influence selection for interior applications and factors that affect cost
- Understand factors to consider regarding sealing natural stone

reen Product Evaluation Necessitates Making Trade-Offs

Sponsored by USG

EARNING OBJECTIVES:

- Better judge the sustainability of materials
- Specify "green"
- Understand and apply the concept of "embodied energy"





Specifying Ceilings

Multi-sponsored

LEARNING OBJECTIVES:

- Recognize the trends in ceiling design
- Know the primary materials being used to satisfy these trends
- Understand the impact of ceilings on building performance



Innovation Conference Case Study Building
The Hearst Building, New York City
Norman Foster, Architect

SAVE THESE DATE
November 15 and 16, 20

The Third Annual McGraw-Hill Construc

INNOVATION CONFERENC

SHAPING THE FUTURE OF DESIGN AND CONSTRUCTION

Enabling Imagination • Enhancing Process • Enriching De

Presented by *Architectural Record*
in partnership with *Engineering News-Record*.

Tuesday, November 15, 2005

Session I. Radical materials: *Where do they come from and what's h*
A panel of experts will take attendees on a whirlwind tour of the creative and
process. Fresh from the lab, these items will transform the way you design ar
You'll be able to examine samples and take them with you.

Wednesday, November 16, 2005

Session II. If you can draw it, you can make it. Digitally-enabled manufacturing
forming the way we design and build—from custom moldings to entire h
and almost anyone with CAD can take part in the revolution. Get in on it.

Session III. Case Study: The Hearst Building's architects, engineers, cons
and owner will present a comprehensive case study of the new structure. Ta
innovation: from its anticipated Gold LEED rating to its creative constructi
gorgeous design, The Hearst Building embodies a spirit of new thinkin

Two days of inspiration and tools you can use.
If you're an architect, engineer, or contractor wh
got to stay on the cutting edge, you must attend.

CONTINUING EDUCATION

Innovation: Shaping the Future of Design and Construction q
for Continuing Education Credit

The Conference will be held at the McGraw-Hill Compa
Corporate Headquarters, New York

To register cont
Chuck Pinyan, 212/904-463
chuck_pinyan@mcgraw-hill.

For sponsorship information cont
Dave Johnson, 212/904-393
dave_johnson@mcgraw-hill.

The McGraw-Hill Companies

connecting people_projects_products

McGraw_Hill CONSTRUCTION

Find us online at www.construction.com

MARVIN
Windows and Doors
Made for you.



Rock Island Lofts exterior: Marvin's extruded clad wood windows enhance views, while meeting wind loading requirements at the Rock Island Lofts by Oertel Architects in Minneapolis, Minnesota.

MARVIN WINDOWS AND DOORS PRESENTS

Silence is Golden: Controlling Sound in Non-Residential Structures

Sound is everywhere and it affects our lives in many ways. Some sounds we choose and enjoy—music, friendly conversations, rain softly falling on the roof, birds welcoming the morning sun, water splashing on a sandy beach. Others are forced upon us—road traffic, the pounding of a passing car's audio system, emergency sirens, airplanes taking off and landing, trains rumbling through town, jackhammers on a construction project, commercial lawn mowers, the clap of thunder and lightning.

ONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Silence is Golden: Controlling Sound in Non-Residential Structures.** To earn one AIA/CES earning Unit, including one hour of health safety welfare credit, swer the questions on page 173, then follow the reporting structions on page 267 or go to the Continuing Education section *archrecord.construction.com* and follow the reporting instructions.

ARNING OBJECTIVES

ter reading this article, you should be able to:

- *Recognize situations that require sound control in non-residential structures*
- *Understand sound transmission as it relates to occupied buildings*
- *Identify the appropriate sound rating systems for glass and framing materials used in windows and doors*
- *List and compare the primary advantages and disadvantages of window and door options*

Although we need some sounds to make us aware of our surroundings, loud sounds and vibrations become unwelcome and irritating noises. In non-residential buildings these can disrupt business meetings, annoy potential clients, reduce employee productivity, interrupt classroom sessions, and potentially cause damage to the human ear.

But as many cities continue to rebuild their downtowns with commercial and residential development, and urban sprawl absorbs the countryside, the increased density of people and buildings raises outside noise levels everywhere.

Inside an office, we expect the normal sounds of business—phones ringing, business conversation or soft background music. But other sounds such as private business discussions or meetings that include audio-visual presentations can disrupt co-workers if they are not contained within the place of origin.

Understanding the relationships between acoustics and health and safety is critical, particularly in the design of a building occupied by hundreds or thousands of people each day. Studies of acoustics to provide solutions to reducing emissions of sound at the source and controlling its infiltration into buildings show that careful design and selection of windows and doors can control sound transmission into and inside of non-residential structures.

Acoustically improved windows are cost-effective long-term solutions to damping noise, and they allow greater design flexibility in non-residential structures. This makes it increasingly important for architects to know how to choose windows and doors that offer significant sound attenuation.

Designing Acoustic Controls

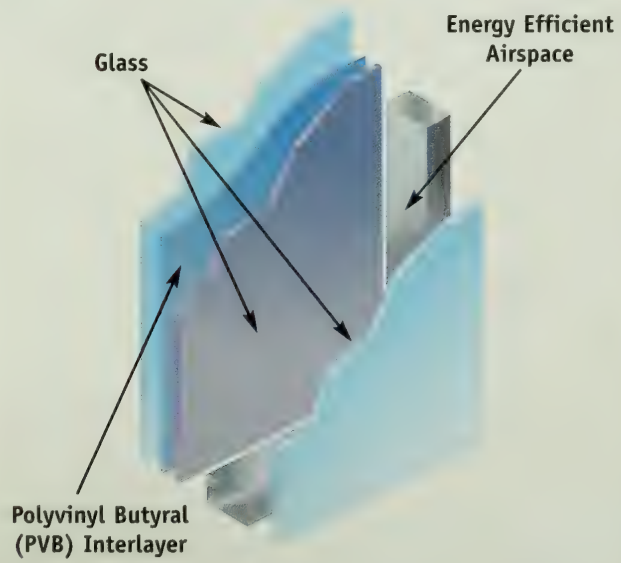
The design phase is the best spot to address acoustic issues. If steps are not taken at this point to identify potential acoustic problems, they will surface after the building is occupied with the possibility of making it unusable without a major retrofit.

The first issue is to understand that sound control can be addressed in three areas: the source, the path, and the receiver. Controlling noise at the source is the optimum solution, but in designing a building, architects can typically control only acoustic conditions through the receiver and the path.

Excessive traffic noise is the greatest irritant for most Americans and the one that affects more people than any other environmental noise source. It can affect the ability to work, learn, relax, etc. And if the noise continues to be an irritant it can lead to health problems such as nerve damage to the ear or issues related to high stress. For buildings located near high traffic areas, some measures may control exterior sounds, including: adding a barrier wall, increasing isolation quality of the structure, masking the noise, or controlling the source.

But these may not be feasible, or may only solve part of the problem. Noise from the outside may still reach a building. When it infiltrates it and becomes a distraction, the windows or doors are often blamed because they have many more components and operational elements than other parts of the structure through which sound may pass. For example, exterior walls typically block between 45 to 50 decibels (dB) of sound and a superior quality window may block under 40 dB. But if a door or window is not sealed properly, air—and sound—can get around or through the seal.

Successful design of non-residential buildings depends on recognizing situations that may increase noise levels, and choosing windows and doors that help reduce sound transmission.



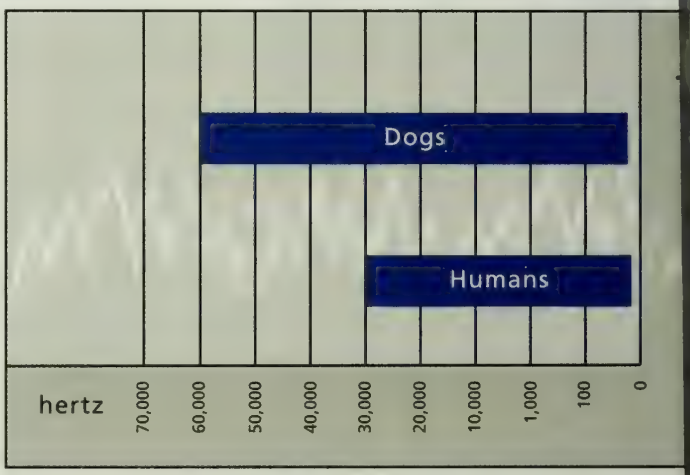
Creating air space between glass panes can improve the STC.

Understanding and Measuring Sound

To help in understanding how to control unwanted noise, let's first define what we are considering. Sound energy is a wave form that travels through matter. It begins when a sound source vibrates or otherwise disturbs the air immediately surrounding the source. Because sound is a wave form, it can travel through air and building materials.

Sound intensity is measured by observing sound energy passing through an area per unit of time. The frequency of sound, or its pitch, is measured in cycles per second, or hertz (Hz). One Hz equals the cycles per second (cps) of air pressure. Frequency is the measure of tonal or pitch quality of sound; a higher frequency indicates a higher pitch. The human ear can hear between 20 Hz and 20,000 Hz.

The intensity of sound is measured in decibels (dB), but a decibel does not quantify other sound characteristics. A higher dB signifies louder sound. The faintest sound detectable by the human ear is 0 dB the loudest is more than 180 dB, which is the noise level at a rocket pad during launch. The loudest intensity the human ear can tolerate without pain is about 120 dBs.



Following Sound Transmission

In measuring what happens to sound, several key terms need to be understood. They are: reverberation, reflection, sound transmission class, noise reduction coefficient, Mass Law and Limp Mass Law.

Reverberation is the prolongation of a sound in an enclosed space caused by continued reflections of the sound after the source has stopped emitting energy. Different spaces have different reverberation times. A high reverberation time, such as that caused by highly reflective room surfaces, will cause a build-up of noise level in that space.

Reflection refers to sound that strikes a surface or several surfaces before reaching the receiver. The shape of a space and the material on the surfaces affect reflection. Reflective corners or peaked ceilings can cause annoying reflections and create loud spaces. Parallel surfaces can cause standing waves of sound between them. Domes and concave surfaces cause reflections to be focused rather than dispersed. Absorptive surfaces can help eliminate reverberation and reflection problems.

Sound Transmission Class (STC) is a single-number rating of the barrier effect of a material or its assembly. Higher STC values indicate more efficiency in reducing sound transmission. The rating assesses airborne sound transmission at a range consistent with the frequency range of speech and does not assess low frequency sound transfer. Because of this, special attention should be given to spaces where noise transfer concern is other than speech, such as mechanical equipment, music, and transportation equipment sounds.

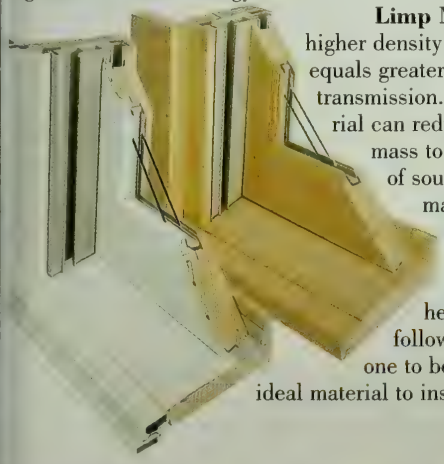
Additionally, any penetration, air gap or flanking path can seriously degrade the sound abatement on walls with a high STC rating. Flanking paths are a means for sound to transfer from one space to another by traveling through something other than walls and floors, such as ductwork, plumbing or corridors.



Exterior of Salisbury School: Salisbury School, Salisbury, CT by The Office of Michael Rosenfeld, Inc., Architects maintains old school appeal with new school technology.

Noise Reduction Coefficient (NRC) is a single number index for rating the absorption level of a material. The standard is the average of the mid-frequency sound absorption coefficient and is unrelated to a material's STC rating.

Mass Law is the principle of physics that explains transmission of noise from one area to another. It states that the more mass or weight a sound wave must move to create vibration transfer, the greater the noise energy.



Limp Mass Law states that higher density plus more flexibility equals greater reduction of sound transmission. The stiffness of a material can reduce the effectiveness of mass to slow down the transfer of sound, so very thin, stiff materials would have a very high vibration transfer. Thus, the ideal noise barrier would be heavy and flexible. Only following this law would lead one to believe glass is not the ideal material to insulate against sound because of its lighter weight and stiffness. However, one must also recognize that components of windows and doors, particularly the glass, can be modified to reduce sound transmission.

Using Rating Systems

Three primary factors affecting sound transmission into a building through glass are: glass thickness, the amount of air space between panes of glass, and damping of the glass. Each of these can affect a window or door product rating.

The most widely used and accepted rating for absorption level of material is the NRC. But according to the Web site, www.acoustics.com, NRC is a laboratory test rating that is not necessarily enforced. An NRC rating indicates an average of how absorptive a material is at only four frequencies: 250, 500, 1000 and 2000 Hz. Ratings range from zero for perfectly reflective to 1 for perfectly absorptive and are always expressed as a decimal rounded to the nearest .05.

This type of rating has some drawbacks. First, the four frequencies on which it is based are common to speech, but do not take into account other low frequency sounds such as traffic or heavy equipment. Second, materials with the same rating may not perform the same because the rating is only an average. Third, because the testing is done in a lab setting, the results in the field may not be the same due to variables such as installation.

In comparing absorptive characteristics of different products, it is important to know if the manufacturer's product was tested at the same four frequencies as the NRC rating.

Another important measurement to look for is transmission loss (TL), which shows a material's ability to block sound at a given frequency, or the number of decibels that sound is reduced in passing through a material such as doors, windows, space dividing elements, wall assemblies, etc. The less sound transferred through the material the higher the transmission loss. The basis for determining a material's STC is measuring its TL using a range of 16 different frequencies between 125 and 4000 Hz.

Although the STC rating is used to compare sound insulating properties of various building materials and assemblies, it is based only on types of noise commonly generated within buildings. So another rating method, the Outdoor Indoor Transmission Class (OITC), is used to evaluate the types of noise typically generated outside that may penetrate to building interiors.

The OITC rates lower frequencies of sound such as those generated by air and ground transportation—planes, trains, trucks and automobiles—and is a more accepted rating for building envelopes. But because OITC for windows is calculated over a specific set of frequencies, sounds at a particular frequency may not be rated through this method.

Determining Acceptable Sound Levels

It's understood that some sound will penetrate any building, so let's look at what's acceptable and how to measure it. Noise Criteria (NC) level rates the noise level for an interior space. The higher the NC rating, the louder the interior noise level. For new construction, an NC should be established based on the type of space and its intended use. For example, when designing a conference room it is important to have a very low background noise or NC level. A room with an NC 40 rating has significant background noise and would be unacceptable for a conference room. A conference room with an NC 30 rating may be acceptable, but an NC 20 rating is the optimum. For a classroom, the NC level should not exceed 35.

Comparison of Sound Intensity and Sound Pressure Level

Sound Intensity or Pressure	Sound Pressure Level in dB	Typical Sounds
1,000,000,000,00	120	Thunder Clap
10,000,000,000	100	Boiler Factory/Subway
100,000,000	80	Noisy Office
10,000,000	70	Average Street Noise
100,000	50	Average Conversation
100	20	Whisper
1	0	Threshold of Audibility

As shown in the chart above, the sound pressure level is a simple way of classifying sound intensity. The chart lists sound pressure levels in decibels (dB), and shows that a sound pressure level of 0 dB does not mean there is no sound, but rather that there is no sound detectable by a person with normal hearing.

Because decibels are measured logarithmically, this means as decibel intensity increases by units of 10, each increase is 10 times the lower figure. This means that 20 decibels is 10 times the intensity of 10 decibels and 30 decibels is 100 times as intense as 10 decibels. A 10 decibel change is perceived as a doubling or halving of the sound level by the human ear.

This rating system can be used to evaluate the acoustical performance of glass in windows or doors. The evaluation must consider the application in which the glass will be used, as well as the framing that supports the glass and its contribution, or effectiveness, at controlling sound transmission. Higher STC ratings can be achieved if windows are tested as a fixed units. Architects and specifiers should verify that product ratings reflect testing of the unit in its frame (not just of glass), and that tested units are operators if that is what is to be used in a planned project. Ratings on products also should be in accordance with ASTM standard and typically are shown in a two-digit designation.

The STC introduced in 1970 ASTM E 413, which rates a partition's resistance to airborne sound transfers at the speech frequencies of 125 to 4000 Hz. The higher the number, the better the isolation.

The OITC ASTM E 1332 is used with STC to simulate the human ear. The OITC rates sounds at 5 to 10 decibels lower than the STC ratings.

Reducing Sound Transmission

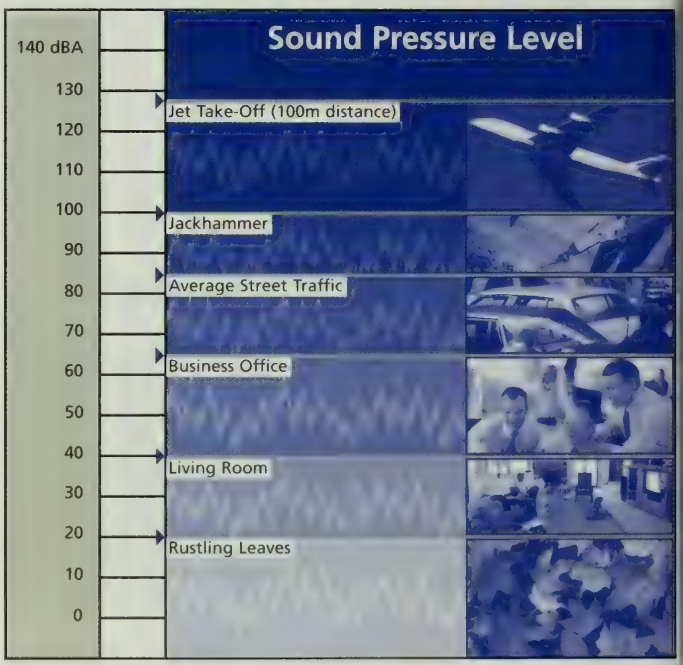
The location of a building has a very large influence on noise levels. Those in high sound areas near airports, freeways, transit systems, and high wind patterns are most easily affected. Airports are huge contributors to environmental and noise issues, and although progress has been made in regulating airport noise, it remains a major factor for site selection and the need for noise reduction measures for both residential and non-residential structures.

In some cases noise can be reduced or muffled with earth-berm barriers for lower levels before it reaches a building, but in most cases it is the building materials and sound attenuating windows and doors that help reduce the amount of unwanted noise penetrating all levels of a building.

Acoustical Properties of Glass Types

Acoustic Performance	Glass Type	Threshold STC
Poor	Single pane	22
Moderate	Single pane + storm panel	28
	Insulating glass	28
Better	Traditional laminated glass	35
	IG w/1 laminated pane	35
Best	Heavy single pane laminate	39
	IG w/2 laminated panes	42

This chart shows various levels of sound attenuation for different types of window and door glass. The higher the STC rating, the better the capability of the glass type to provide insulation against sound. A modern double-pane, weather-stripped window or door offering 3-mil, double-strength glass, has a 28-to-32 STC rating. By comparison a 2-foot-by-4-foot wall with a single layer of 5/8-inch drywall with an empty cavity has an STC rating of 33. The same wall filled with insulation has an STC rating of 39 and a solid wood door can have an STC ranging from 35 to 45. To push the STC past the mid 40s, requires combining several techniques and conditions including: creating air space between panes, layering and laminating the glass, checking the method and quality of weather stripping, evaluating framing and storm panels and verifying installation methods.



Improving the STC rating of a window or door depends on the structure, its location, and factors such as the difference between flexible and solid installation, air gaps, and the addition of weather stripping. Specifications for airport locations, and other noisy areas, for example, often require STC ratings between 35 and 45. If an exterior background sound level is 75 dB or slightly higher than the general noise produced in an office environment, (experts recommend) an interior partition with an STC rating of 40 should be specified to provide the proper sound control. However, the most critical step is to determine the degree of tolerable noise within the structure as well as the needs of the owner and occupants at the outset of a project.

In determining specific STC ratings of glass and a window or door assembly performance to certain ASTM standards should be required including:

ASTM E 90–90, Sound Transmission Class, is a laboratory test method for measuring airborne sound transmission loss of building partitions such as walls of all kinds, operable partitions, floor-ceiling assemblies, doors, windows, roofs, panels, and other space-dividing elements.

ASTM E 413–04, Classification for Rating Sound Insulation, covers methods of calculating single-number acoustical ratings for laboratory and field measurements of sound attenuation obtained in one-third octave bands. ■

CLICK FOR ADDITIONAL REQUIRED READING
The article continues online at:
archrecord.construction.com/resources/conteduc/archives/0507marvin-1.asp
To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, call Sweets at 1-800-394-4309.
The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series

LEARNING OBJECTIVES

- *Recognize situations that require sound control in non-residential structures*
- *Understand sound transmission as it relates to occupied buildings*
- *Identify the appropriate sound rating systems for glass and framing materials used in windows and doors*
- *List and compare the primary advantages and disadvantages of window and door options*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 267. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Architectural Record's* web site—*archrecord.construction.com*—to receive one AIA/CES health/safety/welfare Learning Unit.

QUESTIONS

1. Which of the following is the greatest noise irritant for most Americans?
- **a.** Airplane traffic
- **b.** Excessive ground traffic
- **c.** Emergency sirens
- **d.** Car audio systems
- **e.** Construction noise

2. Sound can only be controlled from the source
- **a.** True
- **b.** False

3. What are the primary factors affecting sound abatement of windows and doors?
- **a.** Amount of air space between panes of glass
- **b.** Damping of the glass
- **c.** Glass thickness
- **d.** All of the above
- **e.** Only a. and c.

4. The widely used Noise Reduction Coefficient rating provides a precise number for the absorption level of material at specific frequencies of sound based on actual field tests.
- **a.** True
- **b.** False

5. Sound Transmission Class is a single-number rating of the barrier effect of a material or an assembly. Which of the following are true about STC?
- **a.** A low STC value indicates better reduction of sound transmission.
- **b.** The rating assesses low frequency sound transfer.
- **c.** Penetrations or air gaps have no affect on an STC rating.
- **d.** The rating applies to a limited number of building materials.
- **e.** STC rates only noise generated within a structure.

6. Which of the following does NOT measure sound abatement in products?
- **a.** Noise Criteria Level
- **b.** Mass Law
- **c.** Reflection
- **d.** NRC rating
- **e.** Transmission Loss

7. Which of the following is the most crucial factor in improving the STC rating of a window or door?
- **a.** Laminating the glass
- **b.** Using thicker glass
- **c.** Increasing the air space between panes of glass
- **d.** Adding weather stripping
- **e.** Modifying the framing materials

8. Laminated glass improves a window's or door's STC rating because it offers superior sound damping at high frequencies compared to ordinary annealed glass.
- **a.** True
- **b.** False

9. Using glass layers of slightly different thicknesses will not stop the transmission of sound through the glass.
- **a.** True
- **b.** False

10. Increasing air space between panes of glass can improve sound reduction and thermal efficiency. What is the optimum spacing for sound reduction?
- **a.** 3/8 inch
- **b.** 5/8 inch
- **c.** More than 5/8 inch

About Marvin Windows and Doors

Marvin Windows and Doors is a premier manufacturer of made-to-order wood and clad wood windows and doors. The company's Made for you® philosophy enables Marvin to offer the industry's most extensive selection of shapes, styles, sizes and options. With each product made to a customer's exact specifications, there are no stockpiles of standard sizes, nor warehouses of finished product.

MARVIN®
Windows and Doors
Made for you.®

CIRCLE 64 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Scheherazade Travertine, New Mexico

A real slice *of* nature.

If natural stone was part of the produce family, they'd probably call it organic.

No chemicals. No additives. No laboratory-induced processing. Just the way nature created it millions of years ago.

Today, there's a new emphasis on the real thing, especially when it comes to the products we eat and the materials we use to build with.

Thanks to new sources of supply around the world and the sophisticated technology that gets it out of the ground and to the fabricator at less cost; beautiful, versatile, affordable natural stone is the natural choice in every phase of residential, institutional and commercial construction.

At the Marble Institute of America, we're dedicated to helping architects, designers and contractors to understand how they can effectively use nature's oldest building material in their projects now and in the future.

That's why we're offering our popular *Dimension Stone Design Manual VI*, acclaimed around the world, to architects at a special price of $99. Available in print or on CD.

To get your copy call MIA at 440-250-9222.

MARBLE INSTITUTE of America

www.marble-institute.com

CIRCLE 65 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

RBLE INSTITUTE OF AMERICA
SENTS

MARBLE INSTITUTE of America
Setting the Standards in the Natural Stone Industry



rom Quarry to Residential Countertop



Courtesy of the Marble Institute of America

hanks to a robust supply, new technologies, and a growing appreciation for a virtually maintenance-free product that takes nature millions of years to create, there is a renaissance in the e of granite, marble, limestone, travertine and other members of the tural stone family in residential construction. From kitchens and ths to foyers and fireplaces, natural stone is becoming homeowners' aterial of choice.

This article will familiarize you with the harvest, refinement and stallation of natural stone products. It will also offer insights into ıy natural stone is a sound choice for interior applications.

sidential Countertops

hile many of the current uses of natural stones are traditional chitectural applications, a relatively new application has gained popularity in recent decades. This application is the use of a natural stone surface for residential countertops. It is not an entirely new concept, as natural stones have been used for this function for many years, but only in the past 10 to 15 years has the practice gained widespread popularity. The driving force behind the explosion of the residential natural stone countertop market is undoubtedly the reduction in price due to the efficiencies of modern quarrying and fabrication technologies. Natural stone countertops are more affordable now than any previous time, and that affordability has been complemented with increased product selections, greater availability, and reduced lead times. What was once a product only enjoyed by wealthy owners of extremely high-end construction is now becoming common in modest dwellings, enabling a much greater percentage of the population to enjoy the beauty and benefits of natural stone surfacing.

Natural stone is used increasingly in home building and remodeling, especially for residential countertops. In fact, in keeping with the National Association of Home Builders' Remodeling Market Index (RMI), granite countertops are the most popular single home remodeling feature, by a wide margin, according to a national survey of remodelers. Good looks and low maintenance, plus a trend toward larger kitchens and more bathrooms in residential construction, have made natural stone one of the top 10 most popular materials in home design.

The growth in granite imports over the past decade supports this trend. Since 1992, U.S. granite imports grew 2500 percent, from 64 tons to 1,611 tons in 2004. U.S. demand for residential kitchen and bath countertops is forecast to increase over two percent annually to 467 million square feet in 2007, according to "Kitchen & Bath Countertops," a new study from The Freedonia Group, Inc., a Cleveland-based industrial market research firm.

ONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **From Quarry to Residential Countertop.** o earn one AIA/CES Learning Unit, including one hour of health ıfety welfare credit, answer the questions on page 179, then llow the reporting instructions on page 266 or go to the ontinuing Education section on *archrecord.construction.com* ıd follow the reporting instructions.

EARNING OBJECTIVES

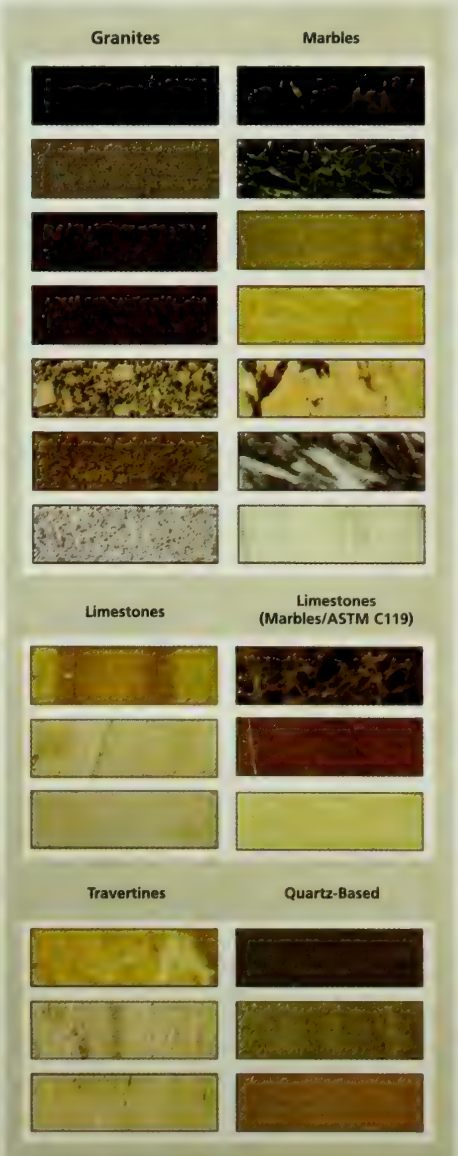
fter reading this article, you should be able to:

- *Know basic sequencing of processes for natural stone to go from quarry to countertop.*
- *Learn elements that influence selection for interior applications and factors that affect cost.*
- *Understand factors to consider regarding sealing natural stone.*

Advances in countertop demand will be stimulated by overall growth in the remodeling segment, which accounted for 71 percent of sales in volume terms in 2002. This is partly because kitchen and bathroom improvements are among the more popular home remodeling projects, and countertops are a key aspect of many of these remodeling projects.

Selecting the stone

Stones for residential countertops must be chosen with regard to functionality. Foods and their handling will affect long-term appearance as acids and grease come in contact with the surface and not all stones demonstrate the same degree of stain resistance. Therefore, selection should be carefully considered. In all cases, and regardless of the type of stone, spills should be wiped up immediately and cutting knives not used directly on the surfaces. There are also nontoxic sealers (necessary in food preparation areas) that can improve the performance of a stone to a great degree. As a rule, lavatory tops in residential bathrooms can be chosen according to taste, since the surface receives little abuse other than pollutants that might be contained in cosmetics.



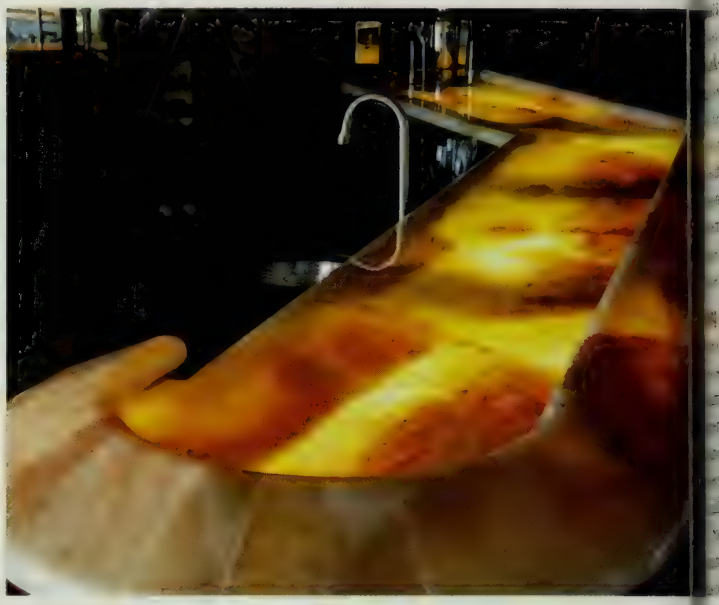
Courtesy of the Marble Institute of America

Classification

Natural stone is classified into two general categories: siliceous stone and calcareous stone. Siliceous stones are granite, quartz-based stone, serpentine, slate and soapstone. They are durable and easy to maintain under normal conditions of use.

Calcareous stones are limestones, marble, onyx and travertine. These stones are also durable, but more sensitive to acids and strong alkaline compounds.

While any number of stipulations may direct selection of a particular stone for a specific application, there are several significant influencing factors. Among them are aesthetics, color, strength, durability, design, texture, finish, size, thickness, availability, stone testing, stone sampling, and last, but certainly not least, cost. The effects any of these factors may have on another can influence the final choice. But aesthetic considerations nearly always drive the selection process.



Courtesy of the Marble Institute of America

Colors

A palette of colors and a variety of textures provide ready options in the aesthetic choices among dimension stones. Yet it is advisable to examine and apply other factors that may recommend alternatives to a selection based purely upon aesthetic appeal. A stone that is most desirable in appearance, for example, may lack the strength needed or durability for a particular application. The cautions regarding exterior applications are of far less concern when considering interior installations. Aesthetics can be allowed much freer rein for stone that is not subjected to the elements.

Variegated or veined materials, especially marbles, that offer interesting colors and patterns, and which are by their nature "faulted," are often highly valued for their decorative qualities in interior installations. Vein trend should run in only one direction unless approved otherwise by the Client. Inclusions and veins must be sampled. Translucence occurs in some white or very lightly colored marbles and onyxes having a crystal structure that will transmit light to varying degrees depending upon stone thickness and finish. Translucence can be an aesthetically intriguing decorative attribute.

Composition

Granites are made up of several different minerals, each mineral having a different hardness. Granites commonly contain quartz, feldspars, biotite, amphiboles, ferrous titanium oxides, and other mineral combinations. On the Mohs' Scale, a scale of relative mineral hardness, diamonds are the hardest mineral with a rating of 10. Feldspars have a hardness of 6.5 to 7 and are very durable. On the other hand, biotite (the black minerals throughout the slab), are very soft (2.5) and flake easily.

All true granites have biotite in their composition. Because biotite is soft and flaky, the first few layers are removed during the polishing process, causing pits throughout the slab. Some granites have more biotite throughout their composition than others. The higher the biotite content of the stone, the more pits it will have. Most, polished igneous rock will have varying degrees of pits, depending on the amount of biotite, muscovite, and phlogopite.

The pits do not make the granite less durable or otherwise inferior. Pits are common in all granites and should be expected when dealing with a natural, polished stone containing several types of minerals with different hardnesses.

What's it going to cost?

A key factor in determining which stone to use is the price. Today, thanks to the development of new technologies, stone is plentiful and competitively priced with man-made materials. The real cost is on the design and its installation costs. There are many alternatives in stone selection, with a range of prices to fit any budget. The specifier should ask for a budget price when initially considering a stone for the stone only. In the final consideration and determination, the specifier should know the real cost of the stone based on the design and its installation costs to see if the stone fits into the job's budget.

Going to the source

One of the reasons for the growing interest in natural stone is the new supply. Currently there is a vast inventory of raw material being quarried around the world—in the United States, Canada, South America, Italy, China, India, Africa and more. Many of these sources were not available a decade ago. Furthermore, where selection of natural stone for a project was once limited to what was locally available, today's stone marketplace is basically worldwide.

Stone quarry sites are discovered in several ways, the most common being the visible presence of an outcropping of stone that has been exposed through erosion or uplifting. The stone prospector takes samples of the stone from near the surface and polishes them to determine the color and texture of the stone. From these samples a determination as to the marketability of the material is made.

Cores are drilled to significant depths into the stone mass to assess the consistency, continuity and extent of the deposit. Petrographic examinations are performed to identify and quantify the various mineral contents within the stone matrix. Throughout this evaluation process, stones with inconsistent color, excessive cracking, or deposits including corrosive or staining mineral inclusions will not be pursued as candidates for the dimension stone market.

As new sources of supply are discovered, new technology has already made it possible to greatly reduce the cost of quarrying, processing and installing natural stone, which makes it competitive with man-made materials.

Extracting and shaping natural stone

The separation of the stone blocks from their long-held position is done by a variety of methods. The use of explosive charges loaded in drilled holes is the historically favored method in granite quarries. While still in use today, environmental concerns over dust and noise levels, plus quality concerns stemming from explosive-induced cracking in the stone have made this method less popular.

High-pressure water cutting technologies have been used in quarries of all stone species, but the equipment is a rather substantial investment, the noise levels are quite high, and the process does not lend itself to subfreezing temperatures. In quarries of granite materials with a presence of quartz minerals, the use of propane flame cutting has proven effective and reliable. This process takes advantage of the differing rates of thermal expansion between the various minerals to produce a thermal desegregation from the stone mass.

Rapidly advancing as a popular choice among quarries of all stone species is the use of diamond cable saws. This technique involves the use of a cable fitted with diamond abrasive segments. Intersecting holes, horizontal and vertical, are drilled in the stone mass to facilitate the threading of the diamond cable. The cable is then spliced to form a loop, which is propelled by a pulley, and grinds a kerf through the entire mass of stone. The diamonds are cooled and lubricated by water as they cut through the stone. This



Courtesy of the Marble Institute of America

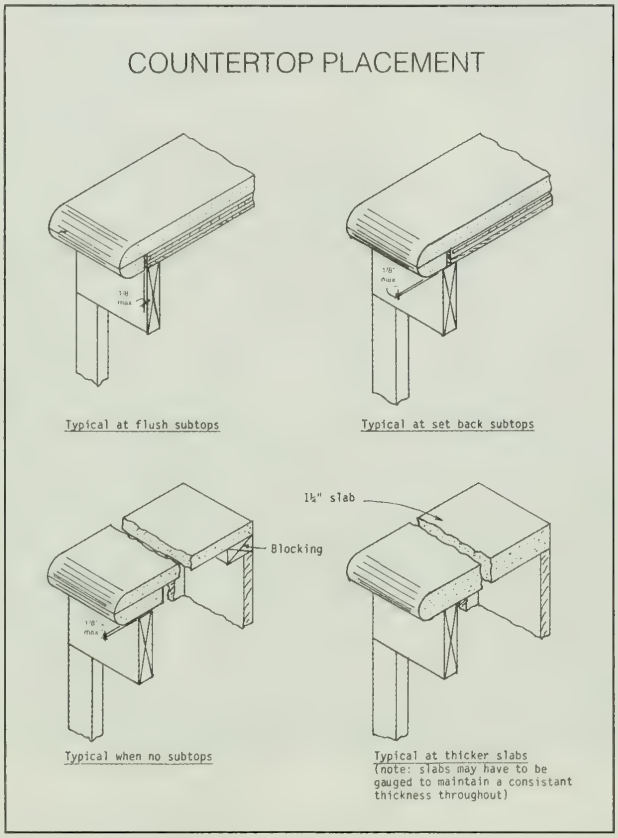
technology provides several advantages from both environmental and product quality perspectives. Environmentally, it is one of the lowest noise-producing methods, and as a result of the water-cooling, it does not produce airborne dust. No mechanical or thermal shock is introduced into the stone blocks, so the development of new cracks or promulgation of existing cracks is not likely.

In many stones, particularly sedimentary varieties, there exists a natural horizontal separation plane within the stone mass. The quarry will take advantage of these natural separations, or "beds," which eliminate the need to make horizontal cuts in the stone mass.

The layout within the quarry is done to take full advantage of the natural rift, crack and vein properties of the quarry. Care is taken, to the greatest extent possible, to quarry in a direction coincident with these natural features, thereby maximizing yield and minimizing waste. The blocks are trimmed to regular, rectangular shapes and inspected upon extraction. Most quarries produce stone for diverse product lines. Each product line can have specific structural performance or visual grading criteria, commanding different market prices.

Obtainable block sizes will vary from quarry to quarry. In some quarries, the presence of natural cracks occurs so frequently that the largest block sizes yielded may not exceed $1 m^3$ ($35 ft.^3$). In quarries experiencing less natural interruption, block sizes can

be enormous. There are quarries that have yielded industrial application blocks exceeding 13m (44 ft.) in length. From a practical perspective, most blocks are trimmed to a maximum size of 1.7 x 1.7 x 3.2m (5'-6" x 5'-6" x 10'-6"). This size, when obtainable, is optimal for transport by truck, as the weight of this block approaches 50,000 lbs. (22 metric tons) and can usually be hauled in most regions without permits or specialized equipment. After slabbing and trimming are completed, this block will produce usable slabs of approximately 1.5 x 3.0m (5'-0" x 10'-0").



Courtesy of the Marble Institute of America

In natural stone processing plants, high-speed gang saws running 24 hours a day can slab a 20-ton block of granite in little more than two days with flatness and thickness tolerances not previously enjoyed in the industry. Computerized cutting machines can make cuts measured in thousandths of an inch.

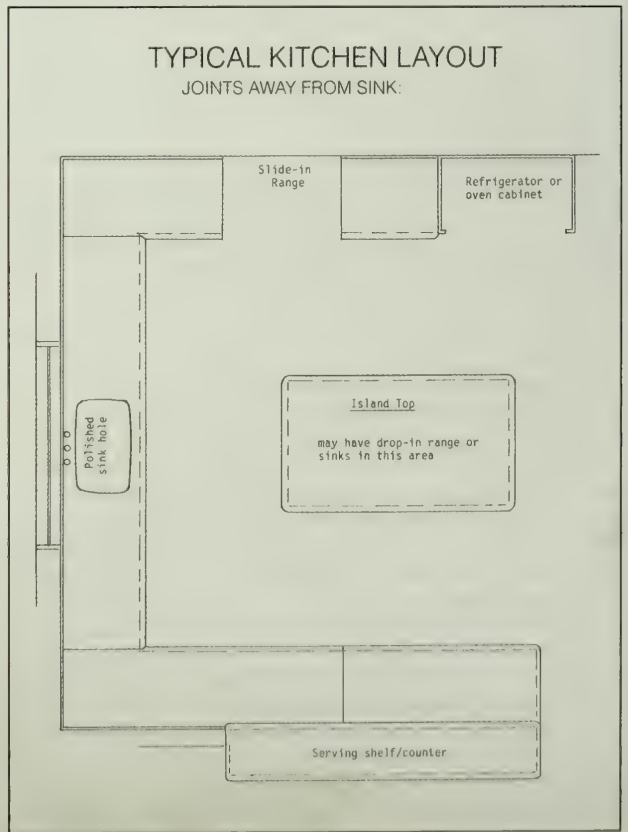
Slabs can be sawn using wires carrying a silicon carbide slurry as an abrasive, or with wires fitted with diamond abrasive segments, with large (3.5 m ø - 11.5 ft ø) diamond segmented circular saws, or with reciprocating gang saws. For the thin slabs used in countertop fabrication, the most common method would be the reciprocating gang saw, and the most common abrasive used is steel shot. The slurry containing the steel shot will normally include lime, as this will increase the viscosity of the slurry and aid in holding the steel shot in suspension. Since steel is softer than many of the minerals found in natural stones, this process is very time consuming. In the harder varieties of stone, the downfeed rate of the saw is approximately one inch per hour, with a 'sawout,' or complete sawing of one block, often requiring in excess of 50 hours of operating time.

Finishing it up

There are a variety of finishes applied to natural stone slabs, but the overwhelming favorite for countertop applications is the polish finish. A polish finish is achieved by grinding the face of the slab with progressively finer abrasives. Modern stone producing factories will accomplish this task on a continuous line comprised of 12 to 24 'heads' that grind the stone surface as the slabs are moved on a conveyor. The speed of the line varies with the particular equipment and abrasive used, as well as with the hardness of the material. Specific fabricators may use gloss meters for internal quality control purposes, but at this time there are no industry-mandated gloss meter specifications established. After polishing, the slabs are inspected for the quality of the finish and any blemishes or cracks that appear in the polished surface.

Aesthetic value of the finished countertop is largely influenced by the type of edge profile on the stone. A simple 90-degree polished edge provides a refined, conservative look, while a more complex ogee edge can convey a more delicate elegance to the countertop. Some edge profiles can be vulnerable to chipping due to their sharp projections. The edge profile is cut with diamond abrasive heads on either a router or a CNC (computer numeric control) machine. The latter equipment is far superior, but due to the substantial investment for the equipment, CNC machinery is likely to be found only in the larger shops where the investment can be recovered by keeping the machine busy with a continuous flow of work. Cutouts for sinks and other installed equipment can be done with the CNC as well. Round holes, such as faucet and soap dispenser holes, are normally core drilled with water cooled diamond bits.

After the kitchen and bathroom cabinets are in place, the stone fabricator will visit the project site to procure field dimensions. Normally the dimensions are supplemented by full-sized templates to ensure quality fitting of the countertop. Accessory items, such as sinks, faucets, dishwashers, and cooktops must be available at this time so their requirements can be included in the field dimension and template process.■



Courtesy of the Marble Institute of America

CLICK FOR ADDITIONAL REQUIRED READING
The article continues online at:
archrecord.construction.com/resources/conteduc/archives/0507marble-1.asp
To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, call Sweets at 1-800-394-4309.
The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

LEARNING OBJECTIVES

- *Know basic sequencing of processes for natural stone to go from quarry to countertop.*
- *Learn elements that influence selection for interior applications and factors that affect cost.*
- *Understand factors to consider regarding sealing natural stone.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 266. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Architectural Record's* web site—*archrecord.construction.com* to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. What type of examinations are performed to identify and quantify the various mineral contents within the stone matrix?
 - **a.** Petrographic
 - **b.** Photographic
 - **c.** Paleographic

2. Which method is rapidly advancing as a popular choice amongst quarries of all stone species?
 - **a.** Explosive charges
 - **b.** High-pressure water cutting
 - **c.** Propane flame cutting
 - **d.** Diamond cable saws

3. For the thin slabs used in countertop fabrication, the most common method for sawing a block into slabs would be:
 - **a.** wires carrying a silicon carbide slurry as an abrasive
 - **b.** reciprocating gang saw with steel shot as an abrasive
 - **c.** diamond segmented circular saws with diamond abrasive segments

4. Which is more cost effective?
 - **a.** stone originating from quarries yielding larger blocks
 - **b.** stone originating from quarries yielding small blocks

5. The favorite finish for countertop applications is:
 - **a.** Polish finish
 - **b.** Flamed finish
 - **c.** Honed finish

6. True or False: Stone fabricators must adhere to industry established mandated gloss meter specifications?
 - **a.** True
 - **b.** False

7. The most popular joint filler material for seams between individual stone pieces currently in use is:
 - **a.** silicone caulking
 - **b.** epoxy resin
 - **c.** polyester resin

8. Granite, quartz-based stone, serpentine, slate and soapstone are classified as:
 - **a.** Calcareous stones
 - **b.** Siliceous stones

9. In order to ensure quality fitting of the countertop, dimensions are supplemented by:
 - **a.** Vein trend
 - **b.** Accessory item requirements
 - **c.** Mineral hardness
 - **d.** Natural separation

10. True or False: Proper installation of the countertop requires the stone slab to be dry fit:
 - **a.** True
 - **b.** False

About the Marble Institute of America

For sixty years, the Marble Institute of America (MIA) has served as the authoritative source of information on standards of natural stone workmanship and practice and the suitable application of natural stone products. Membership in the association is worldwide and includes nearly 1,300 natural stone producers, exporters/importers, distributors/wholesalers, fabricators, finishers, installers, and industry suppliers—all committed to the highest standards of workmanship and ethics.



MARBLE INSTITUTE of America
Setting the Standards in the Natural Stone Industry

CIRCLE 66 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



september 23—25, 2005
all together now

Asilomar Conference Grounds,
Pacific Grove, CA

For additional information and
registration, visit www.aiacc.org



G PRESENTS

Green product evaluation necessitates making trade-offs

By Richard C. (Rik) Master, AIA, CSI
Chair Emeritus, Specifications and Building Technology, Professional Interest Area (PIA), AIA
Manager, Architectural and Construction Systems, USG Corporation

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Green product evaluation necessitates making trade-offs.**

earn one AIA/CES Learning Unit, including one ur of health safety welfare credit, answer the questions page 185, then follow the reporting instructions on ge 266 or go to the Continuing Education section *archrecord.construction.com* and follow the porting instructions.

ARNING OBJECTIVES

ter reading this article, you should be able to:

- *Better judge the sustainability of materials*
- *Specify "green"*
- *Understand and apply the concept of "embodied energy"*

ANY WAY YOU LOOK AT IT, SUSTAINABILITY HAS BECOME A FUNDAMENTAL PRINCIPLE UNDERLYING SUCCESSFUL BUILDING DESIGN. FROM A GLOBAL STANDPOINT, SUSTAINABILITY IS IMPERATIVE, as it offers a critically important means for conserving our dwindling natural resources. From an architectural business standpoint, it's becoming an increasingly important consideration, as a growing percentage of building owners and homeowners not only desire "green" buildings, but are now demanding them.

Green has, in fact, gone mainstream. Architects are giving high priority to environmental concerns in their product selection, builders and developers are acutely aware of how sustainability can impact project success and retailers are proactively promoting green products.

Despite its growing acceptance, sustainable building design remains a complex undertaking. Because environmental issues can — and should — be considered in virtually every aspect of the design process, specifiers need to have a working knowledge of a wide range of green definitions, criteria, standards and applications. Sustainability is a long-term evaluation of every decision made, without compromise to future generations.

This article will attempt to clarify some of the issues relative to green product selections and design specifications as they relate to walls, ceilings and substrates.

Green Product Selection

Green product selection is a key component of sustainable design. However, sustainable design should also encompass life-cycle analysis, product durability, embodied energy, the effect on indoor environmental quality, manufacturing locations and the company's environmental record and commitment. In general, green products have traditionally been defined as those that reduce, recycle and renew. Specifically, sustainable products:

- *Reduce* the amount of raw materials and/or the amount of energy needed. Lighter products generally require the use of less energy for transportation, storage and construction. The term "reduce" can also refer to decreasing the amount of material used and/or wasted, thereby fostering manufacturing efficiencies and optimal use of the material.
- Offer high *recycled* content and/or environmentally friendly reuses. The benefits here are obvious. Products with a high recycled content may decrease raw material usage, energy consumption and landfill waste. "Recycle" can also refer to the potential of a product being remade into that product again or into another product as in adaptive reuse (closing the loop).
- *Renew* the environment by using materials that can be regenerated and/or materials offering environmentally friendly benefits, including renewable resources such as agriculturally based materials or products made without chemically bound methods.

Defining Embodied Energy

The virtues of these principles must be considered in terms of how embodied energy and the life-cycle environmental impact of a material affect its sustainability. Embodied (or embedded) energy is the amount of non-renewable energy required to extract, manufacture, transport and construct building products. Embodied energy is this energy studied from a beginning point of obtaining all raw materials (cradle) until a finished use point (gate or market), instead of to the end of a useful life (grave).

"Cradle to grave" is not an appropriate term if we all understand there are options to simply disposing of old building materials in a landfill. Perhaps a better name is "cradle to reuse" or "cradle to cradle:" from the beginning to a new beginning. This consideration must be factored into all green product specifications, as it can significantly – and sometimes surprisingly – impact sustainable design.

Generally speaking, products with low embodied energy are good sustainable design choices, and products with low embodied energy are usually less expensive than products with higher embodied energy. However, this is not to say that products with high embodied energy are always poor sustainable choices.

A high-embodied-energy product may provide significant savings in energy usage over the life of a building. The initial high level of embodied energy in the product is more than compensated for by its ability to reduce a building's recurring long-term energy needs (such as heating and cooling).

One aspect of embodied energy that is sometimes overlooked is the amount of energy used in obtaining the raw materials utilized in making the product. Simply requiring all construction products to be made from recycled materials is often not as efficient from a sustainability viewpoint as one would think. In fact, the energy required to recover and reuse some materials can be much greater than simply producing new materials.

Wood is a prime example of this misconception. While construction and demolition (C&D) wood waste has many reuse options, refurbished lumber accounts for a small percentage of this waste reuse. Most of it is turned into other products ranging from chip-based panels to paper products to compost.

Through life-cycle assessment or embodied energy studies, we can see the effects of recycling products back into the same products.

Assessing Embodied Energy

Up to 95 percent[1] (65 percent is a more realistic value) of aluminum's embodied energy can be saved by using recycled material. This reflects the high energy consumption required in extracting and purifying aluminum from rock (glass made from sand can yield energy savings of 5 percent.[1]) These savings are reflected in the product's cost.

While glass is inexpensive in relationship to aluminum, the recycling savings for aluminum is much greater. But should you specify aluminum over glass? It depends on the use and how it affects your total design solution.

This simple example shows the complexity involved in making product selections and developing sustainable product specifications.

So, what about other construction products? Paper, another wood-based product, is used throughout many designs. The use of secondary paper can save 35 percent[1].

Recaptured Gypsum

Most construction papers are made from the wood industry's leftovers, which include cardboard cut-offs or post-consumer papers (usually newspapers, catalogs or phone books). The face papers used on gypsum panels are 100 percent recycled paper, and some manufacturers started using recycled paper as early as the 1960s. As for the core material, which is primarily gypsum, air and starch, many manufacturers use a by-product gypsum source obtained from coal-burning power plants.

The coal burned in many of these power plants produces undesirable air pollutants, including sulfur dioxide. Wet limestone scrubbers are often used to prevent this pollution from entering the atmosphere. As the exhaust smoke from the power plant rises through the scrubber, its pollutants are chemically removed. The calcium and water in the wet limestone combine with the sulfur dioxide to create calcium sulfate, or recaptured (flue-gas desulfurized) gypsum.



Manufactured from 95 percent recycled materials, the high-performance gypsum fiber products available include interior wall panels, floor underlayments and exterior sheathings.

Recaptured gypsum currently accounts for 25 percent of the gypsum needs of the U.S. construction market[2]. It is predicted that with the increased building of new power plants, the production of recaptured gypsum could account for up to 40 percent of the industry's annual gypsum requirements.

Wallboard manufactured from recaptured gypsum is indistinguishable in terms of performance, appearance and quality from panels made from natural gypsum rock. Given these benefits, the use of recaptured gypsum in drywall would seem to be a "win/win" situation. And in most cases, it is. Let's look at the embodied energy (cradle to market) of paper-faced drywall.

Obtaining raw materials accounts for less than 1 percent of the total (3.6 MJ/kg averaged across the U.S.) embodied energy, while manufacturing accounts for 80 percent[1], followed by raw material shipping (15 percent[1]) and the remainder in shipping drywall from the plant to the distributor (4 percent[1]).

Because gypsum comprises the majority (95 percent) of the raw materials, why use recaptured gypsum if a manufacturer can obtain only 1 percent energy savings? There are several reasons for this, most notably that most power plants are built near large metropolitan areas where drywall demand is very high. Second, because the plants are located nearby, we can factor the raw material shipping energy into the potential savings (15 percent + 1 percent = 16 percent).

So, should we specify recaptured gypsum drywall in all markets? First of all, recaptured gypsum is not available in all parts of the U.S. When the transportation of recaptured panels or recaptured raw materials over a greater distance is factored in, the green value of the recaptured gypsum can be diminished significantly.

In fact, the energy consumption in extracting natural gypsum is so low it equals the fossil fuel used to ship it 50 miles by diesel truck[3]. Transportation requires the use of non-renewable fossil fuels that, under certain circumstances, can negate the benefits of an otherwise excellent sustainable product selection. Therefore, specifying drywall panels simply on their recycled content versus locally produced panels may not necessarily be environmentally sound.

So let's recap drywall and look at some additional interior construction products.

Gypsum Board Panels

Gypsum board scores extremely high on nearly all sustainable design criteria. Gypsum, the primary raw material used to make gypsum panels, forms naturally like salt or limestone, and is one of the most abundant minerals on the planet. It is neither rare nor endangered. The bulk of the remaining materials in gypsum board consist of paper (recycled from newspapers, phone books, old corrugated cartons and cardboard cuttings) and corn or wheat starch binders. These starch binders, which serve as the "glue" in the manufacturing process, are renewable agricultural resources.

The embodied energy of gypsum board is extremely low (see accompanying chart). Drywall has less embodied energy than a wide variety of building products, including brickwork, concrete, particle board, insulation, glass, vinyl flooring, plastics, steel and aluminum[1]. It is also important to note that manufacturing gypsum board is a low-waste production process. In fact, approximately 95 percent of the raw materials entering a board plant leave as finished product. And most of the remaining 5 percent is recycled into small strips used to support stacks of finished gypsum panels. Overall, high-efficiency board plants can produce less than 1 percent material waste.

Construction waste gypsum panels can be reground and made into new gypsum panels when the paper is removed. This waste can also be used for many other functions, including agricultural uses or concrete set material. It is estimated that about 8 million tons of construction and demolition drywall waste are generated each year.

Other reuses for drywall include its addition as a soil amendment (using gypsum as a high-calcium fertilizer or as a method for treating high soil pH), neutralizing the high pH levels caused by road salt applications, odor treatment and concrete setting agent. The majority of this waste is from new construction cut-offs (about 6 million tons). Currently, more than 3 million tons[2] of gypsum are used as soil amendments annually and another 4 million tons[2] are used as concrete setting agents.



Green product evaluation necessitates making trade-offs.



Many acoustical ceiling panels are made from mineral wool, gypsum and smaller amounts of paper and starch, as well as other miscellaneous materials. The mineral wool is made from slag, a by-product of steel manufacturing that consists of calcium silicate and other impurities.

Acoustical Ceiling Panels

Many acoustical ceiling panels are made from mineral wool, gypsum and smaller amounts of paper and starch, as well as other miscellaneous materials. The recycled content in ceiling panels varies significantly, depending on the product type, manufacturing process and plant location. Check the manufacturer's literature to determine the recycled content of the specific panel.

The mineral wool used in ceiling panels is made from slag, a by-product of steel manufacturing that consists of calcium silicate and other impurities. The slag is melted in coke-fired cupolas or electric melters and spun into fibers that are incorporated into the ceiling panel production process. The use of slag reduces the need to mine naturally occurring materials such as basalt rock (this also reduces its embodied energy). It also decreases landfill waste (16 million cubic feet per year).

A high percentage of the paper used in the manufacturing process is recycled pre-consumer (cuttings from cardboard box manufacturing) and post-consumer (newspapers) content. The starches used as binders in the manufacturing process are renewable agricultural resources. Like gypsum board manufacturing, acoustical ceiling production is a low-waste process. Panels that are chipped or broken during manufacturing are recycled and returned to the process (manufacturing efficiencies are 85 percent).

In addition, these panels have high acoustical performance and light reflections. They can enhance the positive effect on the occupants of your design solution. Acoustical ceiling panels can be recycled into new ceiling panels if they have not been contaminated or painted. However, shipping distances need to be evaluated in terms of their impact on embodied energy.

Gypsum Fiber Panels

The gypsum fiber manufacturing process combines gypsum and cellulose paper fibers to create a variety of newly introduced high-performance panels, including interior wall panels, floor underlayments and exterior sheathings. These products are made from 95 percent recycled materials. Specifically, 85 percent of the content in these panels comes from recaptured gypsum and 10 percent is from post-consumer recycled paper fiber.



Gypsum is the primary raw material used to make gypsum panels, which score extremely high on nearly all sustainable design criteria. Most of the remaining materials in gypsum board consist of paper and corn or wheat starch binders.

The panels offer an excellent sustainable alternative to other wood-based panels, most notably lauan, which is harvested from endangered, old-growth forests.

The embodied energy[3] of these panels (5 MJ/kg) is slightly higher than that of paper-faced drywall (3.6 MJ/kg), with most of the increase resulting from shipment of the panel to market. Because these panels are relatively new to the industry, they are manufactured in limited locations and then shipped to various markets.

The recycling of these panels would be similar to that of conventional gypsum panels.

Cement Board Panels

Cement board, a water-durable, multiuse panel commonly used as a backer for ceramic tile, is made from approximately 20 percent recycled materials (fly ash). Fly ash is another waste stream material from power plant emission control processes that features cement-like properties. It is produced by electrical power companies in the combustion of coal and other solid fuels, and is subsequently purchased by concrete and cement board producers for use as an aggregate.

All products impact the environment, and the key is to reduce this impact as a goal of sustainable design. It is very important to look at the cumulative effect a material and its constituent components or processes may have on the environment, both currently and in the future.

For instance, does the material need a finish requiring solvents and adhesives? Will it need to be cleaned or maintained by using toxic chemicals? Or does the material trap dust and toxins more than an alternative material? Consider long-lasting local products that vastly reduce resource consumption, as well as other environmental impacts associated with construction and remodeling.

Green Specifications

In order to maximize the sustainable value of these – and other – building products, architects should incorporate sustainable design criteria into building specifications. Proper specification details ensure that the benefits inherent in green products are supported during the construction process and fully realized throughout the building's life cycle.

The first step in creating an effective green specification is to use a standard specification layout, such as MasterFormat™ from the Construction Specifications Institute. MasterFormat divides specifications into three categories:

- PART 1: ***General:*** *Describes general procedures and administration.*
- PART 2: ***Products:*** *Describes materials, products, equipment and systems.*
- PART 3: ***Execution:*** *Describes the proper procedures for the installation of specific products and systems into designed applications.*

The three-section format provides architects with a structure to add detailed notes and complete explanations of the environmental requirements expected for each project. There's no need to include additional sections, as this may only confuse contractors and building owners who are already familiar with the MasterFormat structure.

When creating environmental specifications, make sure to define your terms. Don't assume that users of the specification will know the exact meaning of recyclability, post-industrial materials or other environmental terms.

Also consider including the following general criteria in your specifications as needed to meet the sustainable objectives of a specific project:

- Outline on-site product storage procedures. Given the fact that standing water is a common occurrence on many construction sites, materials should not be stacked on the ground and cartons should not be left opened and exposed to weather.
- Detail appropriate methods for storing and discarding construction waste that cannot be eliminated. Conduct a pre-construction meeting with appropriate contractors to discuss methods for minimizing construction waste and disposal and to explore alternative reuse options.
- Encourage the establishment of good construction practices. Realistic construction schedules will enable contractors to fully enclose buildings to minimize moisture penetration that may contribute to poor product and system performance.

Sustainable Walls, Ceilings and Substrates

Do *not* include descriptions of a project's environmental goals in the specification, such as attaining a LEED (Leadership in Energy and Environmental Design) rating in the specification. Rather, include this information as part of your instructions to bidders. As stated previously, the selection of green products is only a small part of sustainability.

For a more encompassing guideline, review ASTM E2129 (*Standard Practice for Data Collection for Sustainability Assessment of Building Products*) from the American Society for Testing and Materials and compare manufacturers' responses and backup documentation to this tool.

Note that ASTM E2129 is not a pass/fail standard, but rather a guideline by which to evaluate manufacturers' commitments to sustainability. Manufacturers should provide detailed explanations for each ASTM E2129 response, rather than just a simple "yes" answer to each question. While architects can reference ASTM E2129, they cannot require compliance to it because it is only a guideline rather than a strict standard.

Last but not least, remember the *reduce, recycle* and *renew* principles discussed previously when selecting products to include in the specification. Bear in mind, however, that effective green product selection requires a careful analysis of a wide range of factors. A product with low embodied energy, high recycled content or other obvious environmental benefits is usually a solid choice for sustainable design.

In the end, well-researched green product selections, combined with intelligent sustainable specifications, offer architects a practical and effective solution for helping conserve our natural resources, while meeting a growing demand for environmentally friendly design and construction practices.

References:

[1] AtlaNews, *Embodied Energy in New Zealand Materials,* by Andrew Alcorn

[2] U.S. Geological Survey, *Mineral Commodity Summaries,* by Donald W. Olson

[3] The Athena Sustainable Materials Institute, *Life Cycle Analysis of Gypsum Board and Associated Finishing Products,* by George J. Venta

CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at: **archrecord.construction.com/resources/conteduc/archives/0507usg-1.asp**. To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, contact USG at (800) USG-4YOU. The following quiz questions include information from this material.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series

LEARNING OBJECTIVES

- *Better judge the sustainability of materials*
- *Specify "green"*
- *Understand and apply the concept of "embodied energy"*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 230. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Record's* website — *archrecord.construction.com* — to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. The amount of non-renewable energy required to extract, manufacture, transport and construct building products is termed:
 a. embodied energy
 b. synergystic energy
 c. transformation coefficient
 d. utility
2. A high-embodied energy product may provide significant energy savings over the life of a building.
 a. true
 b. false
3. "Recaptured" gypsum accounts for what current percentage of the overall gypsum needs of the U.S. construction industry?
 a. 15
 b. 25
 c. 43
 d. 72
4. Wallboard manufactured from recaptured gypsum is distinguished from "natural" gypsum board by its slightly green tint.
 a. true
 b. false
5. It is important to include a project's environmental goals in the specification.
 a. true
 b. false
6. Which of the following characteristics do not generally make a material a solid choice for sustainable design?
 a. high recycled content
 b. high embodied energy
 c. low embodied energy
7. It is estimated that ___ million tons of construction and demolition drywall waste is generated each year.
 a. 4
 b. 8
 c. 14
 d. 23
8. Drywall waste can be recycled as a soil amendment, as a concrete-setting agent and in the manufacture of cosmetics.
 a. true
 b. false
9. Gypsum and cellulose paper fibers can be combined to create high-performance products for all but which of the following applications?
 a. shingles with asphalt-like characteristics
 b. exterior sheathing
 c. floor underlayment
 d. interior wall panels
10. Cement board can contain 20 percent recycled content due primarily to the addition of:
 a. calcium sulfate
 b. calcium silicate
 c. fly ash
 d. polymers

About USG

USG Corporation is a Fortune 500 company with subsidiaries that are market leaders in their key product groups: gypsum wallboard, joint compound and related gypsum products; cement board; gypsum fiber panels; ceiling panels and grid; and building products distribution.

United States Gypsum Company, a subsidiary of USG Corporation, is the nation's leading manufacturer of gypsum board panels and the largest user of recaptured gypsum. The company uses more than 3.0 million tons of recaptured gypsum annually in the production of its SHEETROCK® Brand Gypsum Panels. Overall, the panels contain an average of 37 percent recycled content—5 percent post-consumer waste and 32 percent post-industrial waste.

The company also manufactures FIBEROCK® Brand AQUA-TOUGH™ Interior Panels, FIBEROCK Brand AQUA-TOUGH Sheathing and FIBEROCK Brand AQUA-TOUGH Underlayment, all of which are made from a gypsum fiber manufacturing process that utilizes 95 percent recycled materials. These products have also earned the Green Cross certificate from Scientific Certification Systems for their high recycled content. The panels offer an excellent sustainable alternative to wood-based panels, most notably lauan, which is harvested from endangered, old-growth forests.

USG Interiors, Inc., another subsidiary of USG Corporation, is the only manufacturer to offer a limited lifetime warranty against mold growth on acoustical ceiling panels. The warranty is available on the company's ECLIPSE™ CLIMAPLUS™ and ASTRO™ CLIMAPLUS Ceiling Panels, both of which feature a USG-patented anti-microbial treatment for superior performance.

For additional information about USG's environmental practices and products, or to obtain a copy of its *Committed to the Environment* brochure, write to USG Corporation, 125 S. Franklin St., Chicago, IL 60606-4678, call USG's Customer Service Department at (800) USG-4YOU or visit the company's Web site at *www.usg.com.*



(800) USG-4YOU
www.usg.com
Email: usg4you@usg.com

Arboreal



CEILINGS PLUS

800-822-3411
323-724-8166
www.ceilingsplus.com

© 2005, Ceilings Plus®

CIRCLE 68 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

PECIFYING EILINGS: om Classic Curved

ESENTED BY

dams Campbell

eilings Plus

unter Douglas Contract

lbruck

orton Industries

implex Ceilings



CONTINUING EDUCATION

The following learning objectives will help you focus your study as you read **Specifying Ceilings: From Classic to Curved.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 196, then follow the reporting instructions on page 267 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Recognize the trends in ceiling design.*
- *Know the primary materials being used to satisy these trends.*
- *Understand the impact of ceilings on building performance.*



Subtlety is always in style.

Looking at this ad, you might not have noticed the ceiling. That's the whole point. Techstyle® Acoustical Ceilings create a clean, monolithic look that emphasizes the beauty of an entire space.



For literature and our email newsletter,
call toll-free 866-556-1235
or visit www.hunterdouglascontract.com

Installation: Lida Baday Showroom, New York, NY
Architect: Zuliani + Associates
4′ x 4′ panels

©2005 Hunter Douglas Inc. ® Trademark of Hunter Douglas Inc.

HunterDouglasContract

CEILINGS

Circle Reply Card 147



White metal ceiling brightens Columbus, NY retail center. Courtesy Ceilings Plus.

Specifying Ceilings:
From Classic to Curved

Specifying Ceilings: From Classic to Curved

Classic tile ceiling products were created in the 1920s as an alternative to plaster ceilings. These systems were made of cork and fiberboard and offered acoustic and insulation values. According to historical information from Armstrong, during the economic depression of the 1930s product advances were limited to evaluating different raw materials. Cork was rather expensive, so product manufacturers began to develop other fiberboard products from materials such as corn, hay and pine chips, a byproduct of grinding tree stumps.

During the 1940s, ceiling tile products began to rapidly evolve as post-war commercial construction picked up. Fire-retardant products and the first non-combustible ceiling tiles were launched in this period and insulation and acoustics benefits were added.

Through the next several decades more product features were added such as humidity control to prevent sagging, mold-resistant materials and high reflectance surfaces that save energy by reducing artificial lighting needs.

Evolution of these ceiling systems also focused on aesthetics such as perforations or patterns that improved appearance and acoustics. In the last 20 years, acoustics have been improved and perforations have been limited or eliminated by changes in core formulation and surface options.

More Choices

Along with these material improvements, more options in shapes and sizes were developed. As commercial building designs changed, the need grew for accessibility to building systems in the plenum and the suspended grid system came into play. These typically held 2-foot-by-4-foot panels stapled, cemented or suspended on a grid system. Now systems can hold panels as small as one-foot square or as large a 4-foot-by-8-foot and offer other options such as a three-dimensional look where panels sit on the grid and only a small portion of grid is visible.

Today these traditional systems still offer a low-cost, attractive and lightweight ceiling solution. Although more unique ceiling products continue to pop up, standard light-colored ceiling panels have remained the mainstream in commercial or institutional projects.

But they never have been considered the final design solution. Many still refer to the perfect ceiling as plaster/drywall but that does not provide acoustic performance or above-ceiling access— two key issues in commercial buildings. Through their evolution, suspended ceiling systems have maintained a classic appeal and now offer the benefit of meeting today's high performance standards with a monolithic appearance—imitating the perfection of the plaster ceilings they once replaced.

Composition ceiling panels or tiles in white or light shades hold the majority market share for total percent of ceilings installed in commercial structures. Sources from Armstrong indicate wood and metal ceiling products are gaining more attention, but combined they account for only 1 % of the total commercial market and typically cannot compete in cost with composition tiles on a dollar-per-square-foot installed basis.

Pushing the Envelope

Ceiling products continue to evolve both aesthetically and in performance. The creative drive of architects and the desire for more comfort inside commercial buildings have led to development of a broader variety of ceiling options. Greater concern about noise by building owners and occupants has led to products with greater sound reduction. Changes in building operating systems, communications cabling and fire prevention requirements have spurred improvements in ceiling weight, accessibility and fire-resistance. As more owners consider building life cycle costs, manufacturers have developed more durable surfaces that resist scratches and nicks.

And, according to Ceilings Plus, ceiling system suppliers are now meeting an increasing demand for integration of all the systems,



Clinton Library features metal/wood laminate panels. Courtesy Ceilings Plus.

including light, and HVAC into the ceiling system design rather than having portions of it specified by different manufacturers.

Advances in product design and manufacturing technology now allow larger sized panels and a variety of shapes once considered custom, such as radial and trapezoidal, to be available through standard processing.

Technology also has created an image transfer process that, according to Simplex Ceilings, allows client-specific designs, patterns or logos to be simulated on metal ceiling panels.

New fabric options are also now available in large format acoustic panels that provide a drywall texture in a concealed suspension system. However, although dozens of colors are available for panels and suspension systems, nationwide focus group research by Hunter Douglas shows the color specified for 85% to 90% of the acoustical panels is white. This includes composition material as well as metal panels that have a textured appearance through the use of a light color laminate or perforations that create a pattern.

Curved translucent panels brought into the market in the last few years also open up design options. They can be used as canopies tensioned either convex or concave in the ceiling to offer more light and openness while maintaining acoustic values. The panels, which range in color from subtle to bright, help set an atmosphere. The translucent material can be backlit for drama and interplay of light and texture. The same curved system is also available in natural fiber material and corrugated metals. If these panels are installed into a standard suspension system they also allow plenum accessibility.

Sustainable design has also become a strong influence on ceiling product development. Guidelines such as the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) program have brought sustainability to the forefront. Requirements for techniques such as daylighting have brought out more reflective ceiling finishes that can reduce the number of light fixtures needed in a given space, a benefit to energy efficiency and potentially adding LEED points to a project. And, required improvements for indoor air quality (IAQ) have brought modifications in coatings, core materials and adhesives used in ceiling systems.

The growing importance of the LEED program on projects has also given more visibility to certain materials such as metal for its recycled content and ability to be recycled. Wood is also a critical material in LEED certified projects.

Although the market for metal and for wood in ceilings has developed in part because of this added visibility in the green building movement, traditional mineral fiber tiles are also important because they are sustainable by design. According to information from Armstrong, mineral fiber products have between 30%-to-90% recycled material content and are made from mineral wool made from slag, a by-product of steel production, and post-industrial and post-consumer recycled newspaper. Because many composition tiles are recyclable, Armstrong also instituted the first recycling program for certain types of ceiling tiles in which 20 million square feet of ceiling material has been recycled since 1999.

Installation methods and costs also have become a consideration in new ceiling options. To allow creativity on a budget, pre-engineered wall and ceiling systems that integrate curved, domed, and conventional flat drywall ceilings have been developed. Their factory engineering offers fast installation that reduces labor time and costs and easy transition of ceiling elevations and types.

A new capability from Armstrong also offers architects and designers the ability to use radial ceilings in wood, metal or fiberglass. Because these ceiling systems are also factory-engineered they can eliminate the need for drywall bands or field cutting and can be designed to provide access to the plenum.

Although maintenance of ceiling panels is not often a major consideration, accessibility is. Traditionally panels lift up and shift over for access. But many panels now can swing down so maintenance staff don't have to worry about banging panels into wires, ductwork or other things in the plenum or damaging the panel, which is important if the architect has to factor replacement costs into the project.

Because ceiling replacement can affect a building's life cycle cost, the long-term durability of metal and wood as ceiling materials can reduce replacement needs, which some manufacturers say can be as short as 7 years for certain applications and products.

If genuine wood ceilings are desired, many options are available. Typically, solid wood panels will reflect most of the sound that strikes them but the noise reduction coefficient (NRC) of solid wood ceilings have been improved with perforations or other openings for sound waves to pass thru or the addition of fleece backing. According to Ceilings Plus, perforations of at least 10% or greater in wood ceilings can now bring the NRC rating to a range of 0.75 to



Courtesy Simplex Ceilings.

0.80 with the use of sound absorbing materials. An NRC of 1.0 is the highest possible.

Wood in an open grid ceiling also lets sound and light penetrate into the space and the open grid allows integration of illumination, acoustic treatment, air distribution and sprinklers without interfering with the design. Wood grid ceilings are available in many species such as red oak, maple, cherry, birch, poplar or walnut which can be sealed with a clear lacquer, fire treated, stained or painted to fit the desired look. Modular wood louvers are also offered with luminous or non-luminous applications. Monolithic wood louver systems, also available in many species, use main runners and cross member suspension components to create a seamless appearance.

Wood ceilings are also offered in curved and serpentine panels that can create unique free form designs and in planks that can absorb sound and offer accessibility to the plenum.

The appearance of wood ceilings also has changed. Armstrong has introduced a reconstituted wood finish that provides the look of natural wood with a more consistent color and grain pattern in 2-foot-by-2-foot panels that install into standard grid systems. Armstrong also has created a new wood ceiling system with a modest reveal between panels that offers plenum access.

New technology is allowing manufacturers to create systems that combine materials such as wood and metal in ceiling products that achieve the specifications for acoustics, plenum accessibility and light reflectance. These products can provide a wood look with either a veneer or faux wood finish.

Bamboo's popularity as an ecologically friendly material has also put it in the forefront of ceiling finishes. Bamboo finish panels on a core of aluminum can be perforated for appearance and acoustics, offering a sustainable combination based on aluminum's high recycled content and bamboo as a readily renewable resource.



Translucent ceiling canopies grace Fuddruckers restaurant, Lancaster, PA. Courtesy Armstrong World Industries, Inc.

Reaching Up

These new product options are letting ceiling designs become as individual as the people who create them and those who occupy the space beneath them. The driving forces behind the designs are a desire for greater visual appeal and the need for spaces that feel larger and less confining.

As a result, today's ceiling designs are clean and monolithic -- spiced up with curves and influenced by green building goals. More designs now are sculpted or curved, with clouds, transparent forms and a growing variety of creative open grid patterns. Curved panels are also used to diffuse sound or to act as acoustical reflectors.

Vaulted applications of curved ceiling designs are also used more frequently. And waves are floating into ceilings in all types of solid and translucent materials.

Curved ceilings and unusual wall shapes are being designed with wood, metal, drywall, translucent or composition materials. Curved accent panels are used as floating ceiling canopies to create "spaces within spaces." Suspending the panels at different heights is used to add visual impact and create a custom look with standard components.

The open cell remains another popular technique to give the feeling of open space. Mechanical systems are still visible but more open cells are being placed beneath them to create a more attractive appearance while maintaining the sense of openness.

Wood or the appearance of wood is another growing design trend. The newest technique beginning to spread across the United States aesthetically combines metal and wood, contrasting the warmth of wood with the vibrancy of metal.

Placing the Systems

Blending creativity with ceiling product advances offers many exciting opportunities on projects. If you design casinos, they are all about image. Hospitality and retail are also focused on image – plus comfort. Airports and transportation centers need functional materials. Security always requires metal. In exteriors, particularly in extreme weather areas such as Florida, materials will need to withstand excessive wind loads if ceiling materials are used on exterior soffits. Translucent panels as canopies may be used in a wide variety of applications ranging from high profile corporate interiors to upscale retail environments.



John and Mary Pappajohn Center, Des Moines, Iowa. Courtesy Hunter Douglas Contract.

In laboratories or other areas with sensitive equipment, or where humidity and corrosion control and enhanced fire-resistance are critical, ceilings and surfaces usually need smooth surfaces to prevent dust collection and air precipitators or filters to keep any particles such as dust or lint to a specified minimum level.

Acoustics are important in most spaces, including offices, call centers, schools or auditoriums, but in others such as parking garages it has no significance.

Curves can be used to reflect a company's image. A perfect example is the Reebok World Headquarters near Boston where a dramatic 47,000 square-foot curving spine weaves throughout the unique 522,000-



PEOPLE WILL THINK YOU'RE A GENIUS FOR PUTTING ART ON THE CEILING.



If you're searching for ceiling options to make your project a thing of beauty, Simplex Ceilings' diverse selection of products can most certainly help you out. From airports to casinos, we've helped architects and contractors for over 50 years make their projects look even better than they imagined. By following the wave of design and manufacture of commodity and specialty acoustical metal ceilings, we offer a flexible variety of incredible-looking shapes, colours and finishes.

All to satisfy your architectural and design requirements regardless if the application is institutional, industrial or commercial.

So when it comes to designing your project's ceiling, and you want it to look as great as possible, contact Simplex Ceilings.

SIMPLEX CEILINGS
A DIVISION OF INTALITE INC.

CIRCLE 69 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

FREE: 1 800 638-5726 THE NEW WAVE IN CEILINGS WWW.SIMPLEXCEILINGS.COM



Curved, segmented panel ceiling. JFK Airport Terminal 4, New York, NY. Courtesy, Simplex Ceilings.

square-foot structure. The four-story building was designed by Seattle-based NBBJ Architects and features unique wall and window curves, tight angles, and sleek interiors with ceilings that curve into walls using Hunter Douglas curved metal panels.

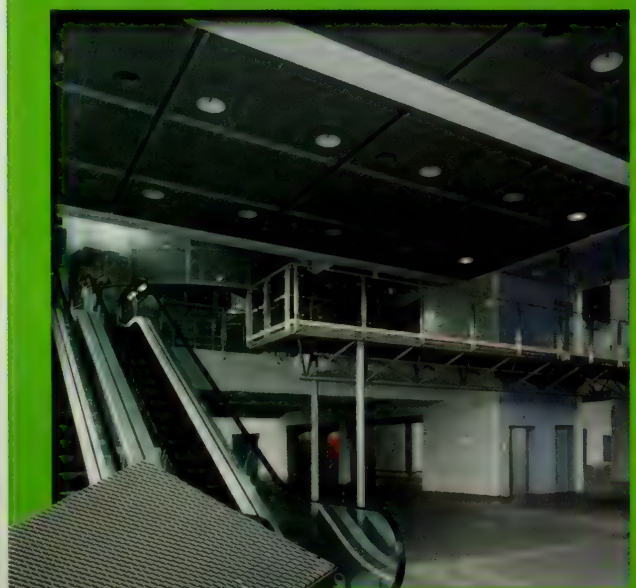
Unifying different spaces into one with a monolithic design was achieved at the new Jen Library at the Savannah College of Art & Design where the ceiling was designed to blend old and new structures. Creating the interior of this building in the city's beautiful historic district was a challenge because the 85,000-square-foot structure was actually three buildings -- each made from different materials of brick, wood and concrete -- merged with one façade. The solution was an open cell ceiling system that enhances the space and creates a clean, modern and continuous visual of one open area. Ceiling heights varied, HVAC systems twisted through the space at different elevations. The ceiling system from Hunter Douglas masked the plenum while providing easy access for service personnel.

A unifying system can also blend style with plenum accessibility. The LEED-certified Capital East End government building in Sacramento features a custom designed torsion spring system in an exciting three-level oval shaped ceiling. The metal ceiling system from Simplex Ceilings has downward accessibility and its torsion spring system allows workers to pull down one side of the panel for access to the plenum while the opposite side sits on the springs.

Downward demountable ceilings such as this are essential if ongoing maintenance is required. Some systems are upward demountable; in both options the panel does not need to be lifted out which eliminates the possibility of damaging panels during maintenance. This feature is also important in applications, such as airports, where panels are exceptionally large and sometimes heavy.

Metal ceilings also can provide energy efficiency. Daylighting techniques at the National Institutes of Health, a LEED certified project, used metal ceilings panels from Ceilings Plus that were curved and canted to all the exterior windows. The reflected light the system provided was the daily light source for the laboratories within the building.

Sustainable objectives were also met with metal at the Clinton Presidential Library in Little Rock, Ark., where more than 9,000 square feet of metal panels with a custom bamboo finish were installed last year. Ceilings Plus developed the bamboo finish panels at the request of the project's architect New York-based Polshek Partnership. Bamboo was chosen because it is a rapidly renewable material and the panels' core was made of aluminum because it



Ceiling tiles that fit your vision.

Your clients count on your vision, your ability to create the sleek lobby, office, store or stadium — right down to the last ceiling tile. That's why illbruck is working to help you think ahead.

With SQUARELINE® Metal Ceiling Tile, you get a modern feel at a sensible price. Like all illbruck products, these tiles are thoughtfully designed and easy to install. Available in three patterns, these galvanized, powder-coated tiles are pre-bonded to our innovative willtec® FM acoustical foam inserts, giving you better acoustic performance than traditional metal ceiling tiles.

For more information about our attractive acoustical ceiling and wall solutions, contact us or visit our web site. We'll help make your vision real.

illbruck
Architectural Products

1-800-662-0032
www.illbruck-archprod.com/metal

© 2005 illbruck, inc. illbruck and the illbruck logo are registered trademarks of illbruck, inc. All rights reserved.

CIRCLE 70 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Admiral's Club (LAX) features a metal and wood laminate system. Courtesy Ceilings Plus.

contains up to 98 % recycled materials. Both materials helped the building qualify for credits under the LEED program and the panels were custom perforated to provide the desired appearance and acoustics.

But metal's most frequent ceiling application is in high volume transportation centers such as airports and train stations where durability and low maintenance are important, such as New York's JFK Airport. This project at Terminal 4 uses a custom curved segmented metal ceiling system that provides a true alignment between panels for a seamless fit. Irregularities caused by sagging, deviation and misalignment of long planks are eliminated, producing a clean and monolithic appearance in a system that is completely accessible.

At Philadelphia's Airport a curved ceiling features an innovative application of style and practical performance. The corrugated perforated metal panels have an 11% open area with a woven acoustic textile adhered to panels for sound insulation. The panel's decorative and versatile properties create stunning visual effects while its flexibility, low weight and sound attenuation meet practical requirements.

Evaluating Options

Using new products and systems to make ceiling designs a reality begins with an outreach for information. While appearance is critical, ceiling options need to be evaluated on other levels, including: acoustical performance, accessibility, light reflectance, recycled content, durability, humidity resistance, fire resistance, size and cost.

When decisions are made on specific features and product options, information from appropriate suppliers can be accessed to help determine what product, material and supplier can achieve what is needed for the design. It is advantageous to do this early in the project because suppliers are sources of experience and product knowledge that can have a positive influence on the final outcome and potentially help the bottom line.

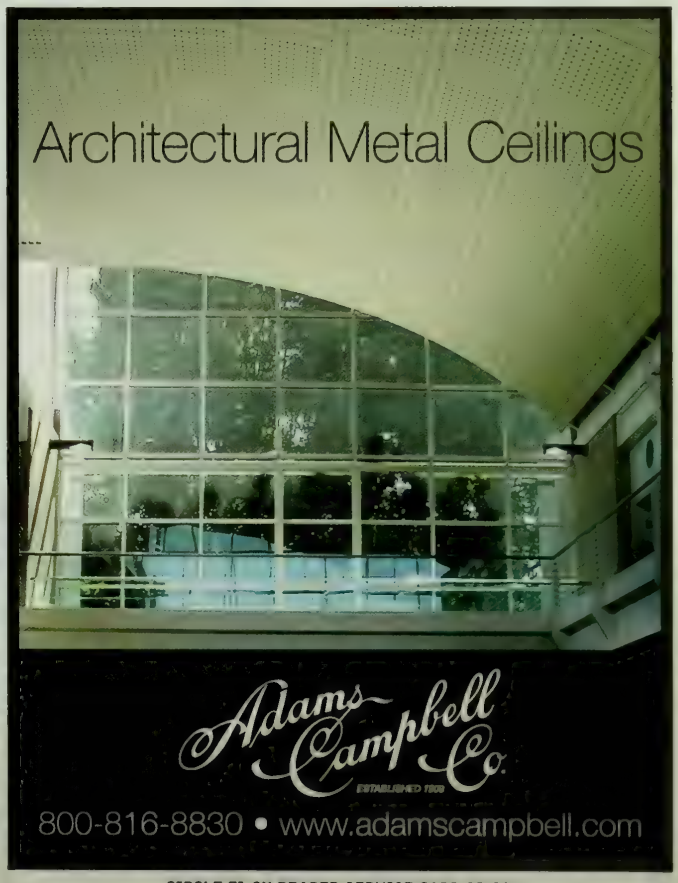
Don Smith, Director of Technical Services for Association of the Wall and Ceiling Industry, says it is critical to check expectations of how materials will come together in a building design so that any adjustments can be made before work begins. "The local market has a bearing on the availability of products and skilled installers. Area representatives of product manufacturers can help determine what's happening in the market where the project will be built. Checking early on this helps confirm costs at the start of design."

Ceiling product manufacturers generally are aware of local code requirements and will provide limits on size and weight of light fixtures, air diffusers and other ceiling loads with their product. They also provide ratings on all products for different applications according to pertinent standards. In comparing these product ratings, check performance measurements for laboratory or actual field-testing.

If acoustics are critical, an acoustical consultant may be the first step in determining the best material for the space.

But if a project will be submitted for LEED certification, these guidelines will have a major bearing on product options and the team should evaluate them in the first stages of the process.

The ceiling choice also has affects a building's IAQ. Ceilings that allow accessibility to the plenum are important to helping maintain the air quality of the space because easy access allows maintenance staff to more quickly measure and adjust air flow systems as needed. ■



CIRCLE 71 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Norton Industries

LOOKING FORWARD TO LOOKING UP™






WOOD LOUVER, GRILLE, COFFER,
LINEAR AND PANEL CEILINGS

ILLUMINATED SKYLITES

CREATIVE CEILING TREATMENTS

FOR MORE INFORMATION,
PLEASE CALL:

(216) 228-6650 or (888) 357-2345

WWW.NORTONCEILINGS.COM

CIRCLE 72 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CLICK FOR ADDITIONAL REQUIRED READING
The article continues online at:
archrecord.construction.com/resources/conteduc/archives/0507ceilings-1.asp

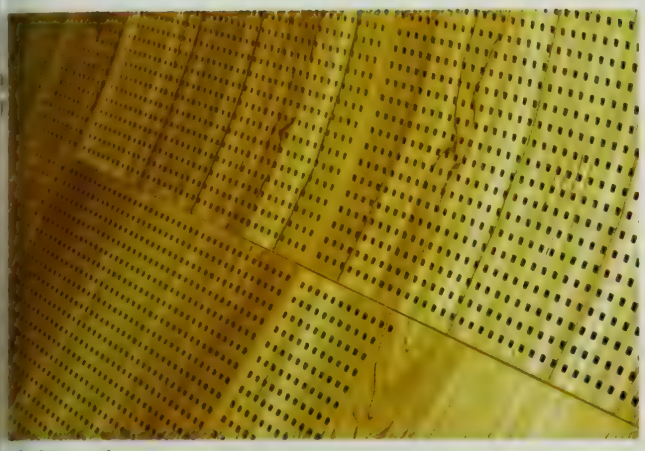
To receive AIA/CES credit, you are required to read this additional text. For a faxed copy of the material, call Marissa Wyss at 1-800-394-4309.
The following quiz questions include information from this material.

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self-report form on page 267. Follow the reporting instructions, answer the test questions and submit the form. Or use the Continuing Education self-report form on *Architectural Record's* web site—*archrecord.construction.com*—to receive one AIA/CES health/safety/welfare Learning Unit.

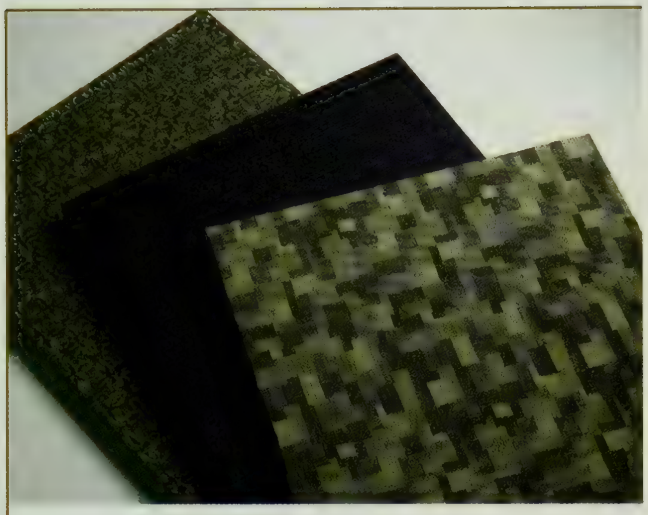
QUESTIONS

1. Standard white or light colored acoustic ceiling panels are specified by what percent of architects?
 - **a.** 40-45%
 - **b.** 60-65%
 - **c.** 85-90%
 - **d.** 90 –95%
2. Metal and wood ceilings account for half of today's commercial ceiling market.
 - **a.** True
 - **b.** False
3. For appearance, which ceiling type is considered the most perfect?
 - **a.** Metal panels
 - **b.** Composition tiles
 - **c.** Plaster/drywall
 - **d.** Solid woode
 - **e.** Wood veneer
4. Advances in the integration of product design and production technology allow products once considered custom to be made through standard processes.
 - **a.** True
 - **b.** False
5. Choice of ceiling systems can help add LEED points for:
 - **a.** Recycled content
 - **b.** Recyclable material
 - **c.** Daylighting techniques
 - **d.** All of the above
 - **e.** None of the above
6. Metal is the only ceiling material with recycled content.
 - **a.** True
 - **b.** False
7. Accessibility to the plenum through the ceiling is necessary primarily for:
 - **a.** Maintenance or repair of building systems
 - **b.** Cleaning ceiling panels
 - **c.** Replacement of ceiling tiles
8. About 20 million square feet of composition ceiling material has been recycled since 1999.
 - **a.** True
 - **b.** False
9. The Noise Reduction Coefficient of solid wood ceilings can be improved by:
 - **a.** Perforating the panels
 - **b.** Applying sound absorbing materials to panels
 - **c.** Creating openings between panels
 - **d.** All of the above
10. Current design trends in ceilings include:
 - **a.** Curves
 - **b.** Monolithic
 - **c.** Open cell
 - **d.** Blending wood and metal
 - **e.** All of the above



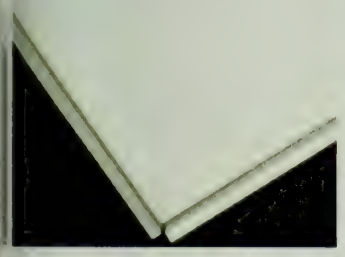
Arboreal

Arboreal(r) ceiling and wall panels have rapidly-renewable bamboo or FSC-certified wood veneer on recycled aluminum for sustainable design, acoustics, light weight, and affordability.
Visit www.ceilingsplus.com
CIRCLE 125



illbruck's FABRITC™

illbruck's FABRITEC™ Wall Panels are lightweight, impact resistant, tackable and easy to install fabric-wrapped panels that absorb up to 85% of the sound that hits them.
Visit www.illbruck-archprod.com/fabritec
CIRCLE 126



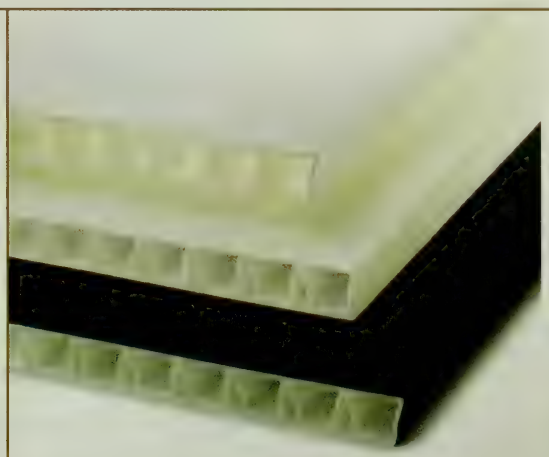
Microplex™

Microplex™ is a perforated tile that can absorb sound waves through the fine holes and absorb sound energy effectively without any acoustical fleeces or mineral wool. With fine perforated holes that are nearly invisible, Microplextm achieves a simple, elegant look while avoiding dust accumulation problems. This product can be used with our concealed or exposed grid. Can be used in airports, hospitals, nursing homes, clinics, healthcare centers, childcare centers, schools, offices, residences etc...
Visit www.simplexceilings.com
CIRCLE 127

Norton Industries Incorporated

Ceilings that can stimulate your senses, inspire you, calm you, exicte you and give you reason to look up.
From Classic to Contemporary - We're Ceilings!
Visit:
www.NortonCeilings.com
CIRCLE 128





Techstyle Acoustical Ceilings®

Techstyle Acoustical Ceilings® by Hunter Douglas Contract provide the perfect blend of functional performance and stylish flexibility. Available in white, off-white and black, Techstyle panels offer a clean monolithic look while an NRC of 0.85 provides excellent acoustical performance across the entire frequency spectrum. For more information call 866.556.1235 or
visit www.hunterdouglascontract.com/ceilings.
CIRCLE 129

What you remove can add value to your designs.



Less is still more. Especially when it comes to removing dust and allergens to improve indoor air quality. A Beam Central Vacuum System provides superior cleaning convenience and improved air quality. It's the only central vacuum system clinically proven to reduce allergy symptoms. That adds healthy value to your designs and lasting client satisfaction. Take advantage of the demand for healthier homes. Specify Beam.



CENTRAL VACUUM
BEAM SYSTEMS

Cleaner, healthier living. Built in.

Free Information Kit: www.beamvac.com | 1-800-947-2326

CIRCLE 73 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Residential

Metal bears the load in more ways than one in these four houses located in distant and nearby places

BRIEFS

Interdisciplinary design firm Mithun won the international Cradle to Cradle Home competition, honoring innovation in sustainable residential design. A two-story "hearth," which includes mechanisms for rainwater collection and treatment, ventilation, and support for solar-energy collection, forms the core of the house. Walls made of spinach-protein cells sandwiched between glass generate additional photosynthetic energy. For more information, visit www.cradletocradlehome.com.

The EPA has delayed action on passing regulations against the hazards of lead-based paint in residential construction. Instead, EPA asks that businesses comply voluntarily with guidelines that require workers to be certified in safe practices against lead contamination before remodeling houses constructed before 1978, when lead-based paint was banned. This could lower renovation costs but would ultimately raise health-care costs. It drew an angry response from public health advocates and Democrats in Congress.

HUD's Partnership for Advanced Technology in Housing (PATH) with Mercedes Homes unveiled two hurricane-resistant prototype homes on Florida's eastern shore. The designs incorporate wind-resistant features such as steel reinforcement, secondary roof coverings, and tie-downs. Concrete bolsters the structures and protects against water absorption. University of Florida students will monitor performance during hurricane season. Ultimately, PATH and Mercedes Homes plan to incorporate the improvements into future projects in hurricane-prone regions. For information, visit www.pathnet.org.

Next year, the OPEN Prototype Initiative, a collaboration between MIT and New Hampshire builder Bensonwood Homes, will build its first house in under 30 days. Constructing a prototype house every 18 months until 2010, this initiative tests advanced designs, materials, systems, and fabrication strategies. The successful application of academic research to building industry norms will set a precedent for how personalized homes can be built quickly and cost-effectively. Visit www.openprototype.com.

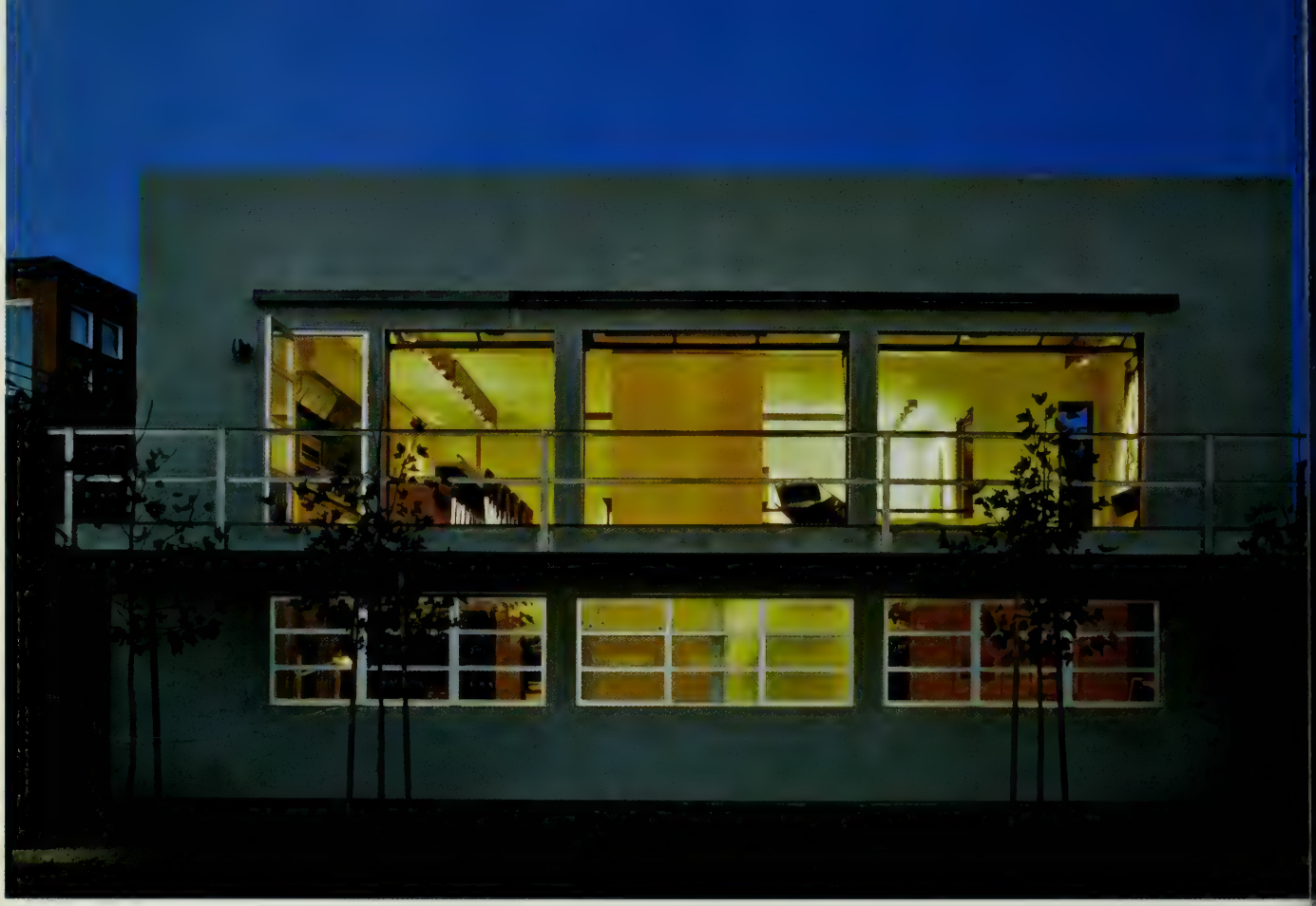
This fall, 18 teams of college students from the U.S., Canada, and Spain will construct a "solar village" on the National Mall in Washington, D.C. Called Solar Decathlon, the competition will judge each house on its energy efficiency as well as aesthetics. Innovative materials and processes developed over the past two years will be later applied to conventional home design. On view from October 7 to 16. Visit www.solardecathlon.org.—*Larissa Babij*

CONTENTS

200 Burton House
LUCE et Studio
206 Ecoms House
Riken Yamamoto & Field Shop
210 James-Robertson House
Dawson Brown Architecture
214 Villa Lucy
WPa
221 Kitchen & Bath Portfolio
231 Residential Products
236 AIA Housing/HUD Award

For years, metal has been used for studs in residential construction, but today it is assuming a more prominent role as a featured player in the architectural expression of many houses. It is energy efficient, and fire-, mold-, and termite-resistant. It is airtight, so it handles strong winds. Framing a metal house goes quickly, and metal is routinely collected from construction sites and recycled. Here we present four houses that feature primarily steel and aluminum. The Burton House demonstrates the virtues of a steel floor—cool in summer, warm in winter. An experiment in lightweight, strong, easy-to-process aluminum, the Ecoms House derives from a prefab kit of parts. Villa Lucy features steel columns, balcony, framing, and detailing. And the entirely steel James-Robertson House (below) was dropped onto its site in pieces by helicopter. The impressive virtues of building with metal are demonstrated here. *Jane F. Kolleeny*





LUCE et Studio brightens a California suburb with the steel-framed **Burton House**

By Ann Jarmusch

Abbie and Bill Burton run a landscape-architecture firm north of San Diego in a busy design district. Home is their tranquil, orderly haven. Unless, that is, they're entertaining, which requires serious cooking in their 40-foot-long commercial kitchen.

Their two-story, 1970s-era suburban house in Cardiff-by-the-Sea has been turned upside down, so to speak, in a renovation by LUCE et Studio. The designers relocated rooms traditionally at street level—kitchen, living room with a deck, dining area—and the master bedroom to the second floor. The move also captures views of the Pacific Ocean and further removes the couple from intrusions.

The kitchen, central to their lives, actually adjoins the master bedroom. Bill Burton likes to roll out of bed and start the soup stock, for example. Thus begins a weekend of roaming along the kitchen counter/dining bar and row of stainless-steel appliances, as he preps meals and watches cooking shows on a wall-mounted TV.

Ann Jarmusch is the architecture critic for The San Diego Union-Tribune.

The Burtons' combination of introverted and gregarious personalities fueled LUCE et Studio's redesign of their home, which was accomplished within the original form and footprint. Jennifer Luce, AIA, a friend of the couple, had already collaborated with them to transform an old warehouse into their office. Talk about redoing the Burton home began with a basic landscape architect's question: What is the ground plane? "That's how the steel floor came to be," Luce said, referring to the bluish-gray steel plate that begins inside the front door, then moves into the house to blanket floors on both levels. Visitors often mistake the

Project: *Burton House, Cardiff-by-the-Sea, Calif.*
Architect: *LUCE et Studio Architects—Jennifer Luce, AIA, principal in charge; Aaron Anderson, project manager; Lindsay Bresser, Sharon Stampfer, Amy Larimer, design team*
Engineers: *R.L. Biggers & Associates*
Consultants: *Burton Associates (landscape); Burke Lighting Design (lighting); Conover Design (exterior colorist)*
General contractor: *Beacham Construction*

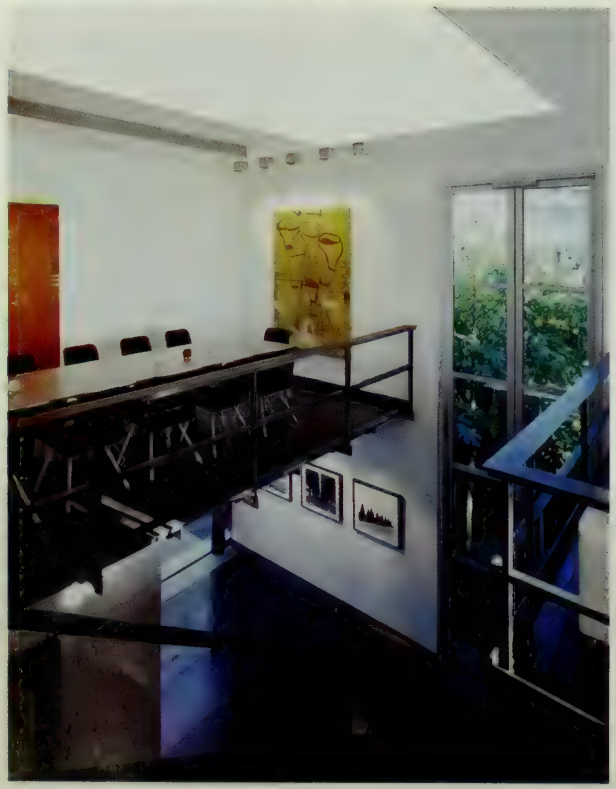


A bank of three, fold-up glass firehouse doors open to a second-floor deck that spans the width of the house (opposite). Inside, the living room, dining room, and an ample kitchen take advantage of the open, well-lit space (above). A silvery, stainless-steel garage door and sliding front door shimmer in the sun (right). The wide front door slides open to a generous hall inside (left).









Sited on the second floor, the public areas take advantage of views of the ocean. Abundant light flows from a skylight, glass firehouse doors, and French doors (above and left).

flooring for stone, perhaps because it was laid like stone. But steel is superior, staying cool in summer and warm in winter.

"Since we and the Burtons are all interested in steel, we discussed an all-metal house, but decided to mediate it with a little wood," Luce added, referring to the western hemlock cabinetry and doors. Still, steel is the star, appearing with rough, polished, and waxed finishes inside and out. From the street, the blank-walled, acid-washed, aggregate-plaster house reveals nothing about its occupants. Luce installed a silvery garage door and sliding front door, both made of bead-blasted stainless steel—simultaneously impenetrable and alluring.

When the heavy door slides open, the house begins to reveal its flowing spaces punctuated by thick hemlock doors and walls. Cabinets 2.5-feet deep, designed for storing Abbie's essentials, such as art, wine, and linens, form a full-height wall—and another protective layer between public and private space. Flush doors in the wall lead to a powder room and the Burtons' two teenagers' bedrooms.

Luce uses controlled natural light to modulate spaces and focus attention on outdoor views the Burtons chose. Daylight pours in from a skylight above a central, open stair—which LUCE et Studio redesigned and reconstructed in steel with rubber treads—to the second floor. The parents spend most of their time at home on this floor, sometimes retreating to the master bedroom to soak in a sculptural, hand-poured-resin tub.

The second floor became an airy, U-shaped loft after Luce added a narrow, cantilevered steel dining area that seats 12 at a long table.

Quality demands a formal audit.



Certi-label™ cedar shake and shingle manufacturers undergo third party inspections PLUS a second level of quality assurance by our own Cedar Quality Auditor.

Certi-label™ products have been tested to meet these recognized standards:

- **Class A, B and C fire-resistance**
- **UL 2218 Class 3 & 4 impact resistance**
- **UL 1897 (fourth edition) wind uplift**

Cedar Shake & Shingle Bureau

tel: **604-820-7700** fax: **604-820-0266** **www.cedarbureau.org**

Certi-label™ products. Always tailor made.

CIRCLE 74 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





SECOND FLOOR



FIRST FLOOR

1. *Living room*
2. *Kitchen*
3. *Dining room*
4. *Bedroom*
5. *Bath*
6. *Laundry*
7. *Garage*
8. *Balcony*
9. *Garden*

An industrial-size kitchen abuts a dining area that accommodates numerous guests for the dinner parties and culinary pleasures that the Burtons so enjoy (above).

She also opened the rear wall to views of the ocean and the Burton-designed backyard with a bank of three, fold-up glass firehouse doors and a pair of French doors, all of which open onto a deck. Luce framed this western view and one of a small side garden (newly accessible through elongated French doors so tall they deliver light to the second floor) to mask unwanted glimpses of other houses.

In a playful corollary to the Burtons' emphasis on privacy, LUCE et Studio created a first-floor powder room and a water closet off the master bedroom as impeccably designed surprises to be discovered—or not—behind thick hemlock doors. Crafted to blend seamlessly with built-in cabinetry, these doors lack hardware or any other clue as to their existence. "Another hidden object," is how Luce describes these elegant little rooms.

Like the Burtons, the house has become dynamic and tranquil, bold and intimate, earthy and refined. It's now a place where the fragrance of herbs and sauces mingles freely with the salty ocean breeze. ■

Sources

Aluminum windows: *Arcadia*

Glazing: *Barrisol (skylights); A&A Glass (glass)*

Doors: *Arcadia (aluminum); Jacobs Woodworks (wood); Crawford-Amber (electric)*

Lighting: *Erco (interior ambient lighting and exterior); Osram (surface lighting); IDL Lighting Services (downlights); Ingo Maurer (task lighting); Lutron Homeworks (controls)*

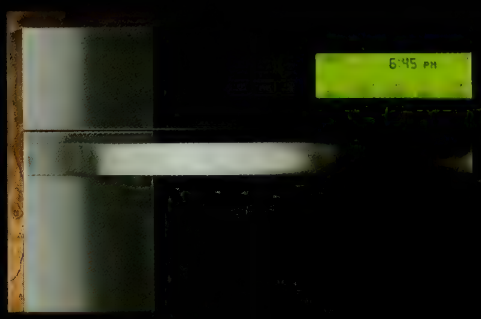
For more information on this project, go to Residential at **www.architecturalrecord.com**.



INTRODUCING

MILLENNIA

ELITE LINE OF WALL OVENS



Only from Dacor will you find the new Millennia elite line of wall ovens. Designed to enhance your kitchen experience, the increased interior capacity, new handle and larger window are a designer's dream. Add the new simple to use menu-driven **Discovery Controller®** and life in the kitchen will never be the same.



dacor

The life of the kitchen

800.793.0093 | www.dacor.com/AR

WALL OVENS COOKTOPS RANGES VENTILATION MICROWAVES REFRIGERATION OUTDOOR GRILLS COFFEE SYSTEMS

CIRCLE 75 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Riken Yamamoto & Field Shop develop the unique **Ecoms House** as a kit of aluminum lattice parts

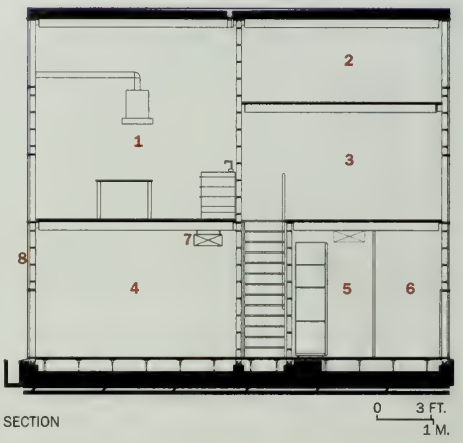
By Naomi Pollock

Japan, the birthplace of the tatami mat, has a long history of modular building. For centuries, the dimensions of these straw pads have dictated the size of rooms, walls, and windows. Picking up where traditional carpenters left off, Yokohama architect Riken Yamamoto has designed a prefabricated aluminum construction system. Ecoms House is the system's first residential prototype. Developed at the request of SUS Corporation, a manufacturer of aluminum precision machine parts and furniture, the house is located in Saga Prefecture on Kyushu, at the southernmost tip of the Japanese archipelago.

Situated next to the SUS factory that was also built using Yamamoto's prefabricated aluminum technology, the house is a 24-by-24-foot cube made from a kit of parts based on a 4-foot module. Each of its four sides is composed of 34-foot-square, 4-inch-thick panels, some transparent, some opaque, and some glass-covered-aluminum lattice that are a little of both. The framework of metal crosses is not only the system's signature element but also functions as a structural support, holding the entire building without sacrificing light and view.

Intended to demonstrate the system's flexibility—it is equally suited to residential and commercial applications—the prototypical house contains two bedrooms, a bathroom, and a storage space on the ground floor; a kitchen, dining area, and workspace on the second. The two floors could be easily flipped for an owner who prefers an office at grade.

While Yamamoto is not the first Japanese architect to experiment with aluminum structural systems, most of his predecessors have simply translated steel technology's post-and-beam construction elements. By contrast, Yamamoto devised components that take full advantage of aluminum's unique properties. Though a lightweight material, it is 1.5 times as strong as steel of the same weight. Because its melting point is lower than that of steel, aluminum is easier to process. If forced through an extrusion machine, cylindrical ingots of the soft metal (which is made from a mixture of recycled cars, cans, and newly processed bauxite) can be molded into almost any shape—even with complicated or intricate details.



1. *Kitchen/dining*
2. *Loft*
3. *Home office*
4. *Bedroom*
5. *Movable shelf*
6. *Bath*
7. *Air duct*
8. *Aluminum lattice panel*

Working within the constraints of the standard pressing machine, which can handle cylinders with diameters up to 10 inches, Yamamoto began creating components that could be put together to make load-bearing walls. The quest for more transparency inspired Yamamoto to refine and simplify the basic building block as much as possible. The latest version is the 9-by-9-inch cross shape made of 0.2-inch-thick flanges joined end-to-end that comprise the 4-foot-square lattice panels used to build Ecoms House. Each flange ends with a hooked tip that dovetails neatly with that of its neighbor. The two pieces are then secured tightly with a tap bolt, resulting in an elegant connection that enriches the lattice's visual texture without obscuring its crosshatched pattern. Though the complexity of the interlocking pieces is reminiscent of Japan's traditional wood joinery, each component is factory-made and mass-produced.

Aluminum has another benefit. Lightweight aluminum panels

Naomi Pollock is RECORD's *Tokyo-based correspondent and author of* Modern Japanese Home *(Phaidon, 2005).*



; dusk the house glows
rough its transparent
d semitransparent
nels (this page). The
use sits next to the
S Corporation, built
h the same prefab
stem (opposite).



can be easily transported and quickly bolted together on-site, shortening overall construction time and saving the client money. Built-in shelving and a unit kitchen (with mix-and-match components) bridge the gap between architectural and human scales. Also reinforcing the human scale is a line of freestanding furnishings Yamamoto designed, which includes tables and bed frames—all of aluminum, of course.

Though the Ecoms system has been used successfully to build a factory, a flower shop, and a beach shelter, no one has used it for a full-time residence yet. While the idea of living in a metal house may be a hard sell (Yamamoto concedes that it is hot in summer and cold in winter, necessitating a 1-inch layer of insulation), the system's remarkable flexibility and its recyclability are big draws. Indeed, it is possible to add, subtract, or even reuse entire walls. Someday Yamamoto hopes that homeowners will be able to lease wall and floor panels as needed. And, as Yamamoto says, "you can't do that with wood or concrete." ■

Project: *Ecoms House, Saga, Japan*
Architect: *Riken Yamamoto & Field Shop—Riken Yamamoto, Naoko Kawaguchi, Jinyu Tei, Miki Matsuda*
Engineers: *Iijima Structural Design Office (structural); Sogo Consultants (mechanical)*

Sources
Aluminum fabricator: *SUS Corporation*
Glazing: *T2 Glass Construction*
Flooring: *Sakaeya*
Roofing: *Gantan Bearty Industry*
Electrical: *Oki Wintech*

For more information on this project, go to Residential at **www.architecturalrecord.com.**



The compact house features a home office on the second floor, which can easily be switched to the first floor (below). The component-based system of interlocking parts reflects the use of the traditional tatami mat, a unit of measure for centuries in the Japanese home (top).



THE NEW LOCKWOOD™ BATH COLLECTION. A STYLISH UPGRADE FOR YOU AND YOUR HOMEBUYERS.

Looking for a stylish new upgrade opportunity for your homes? Your homebuyers will love our exciting new Lockwood Bath Collection, which reinterprets the popular teapot design with a rustic twist, especially in Delta's new Aged Pewter™ finish. Choose from a full suite of products, including a raincan showerhead with optional gooseneck shower arm for an enhanced shower experience. Complete the look with matching accessories and lighting. Also available in Chrome and Brilliance® Stainless.

Trade news. Trade knowledge. Get the latest trade information and materials from Delta Faucet Company, including literature, sales tools and more. Just visit www.deltafaucet.com/tradenews.



Mini-Widespread
Aged Pewter™
Model 4540-PTLHP H240PT



Widespread
Aged Pewter™
Model 3540-PTLHP H240PT



Shower with Raincan Showerhead
Aged Pewter™
Model 17440-PT



Centerset
Aged Pewter™
Model 2540-PTLHP H240PT

BEAUTIFULLY ENGINEERED.™

DELTA

CIRCLE 76 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Two steel pavilions nestled in the trees define Dawson Brown Architecture's **James-Robertson House**

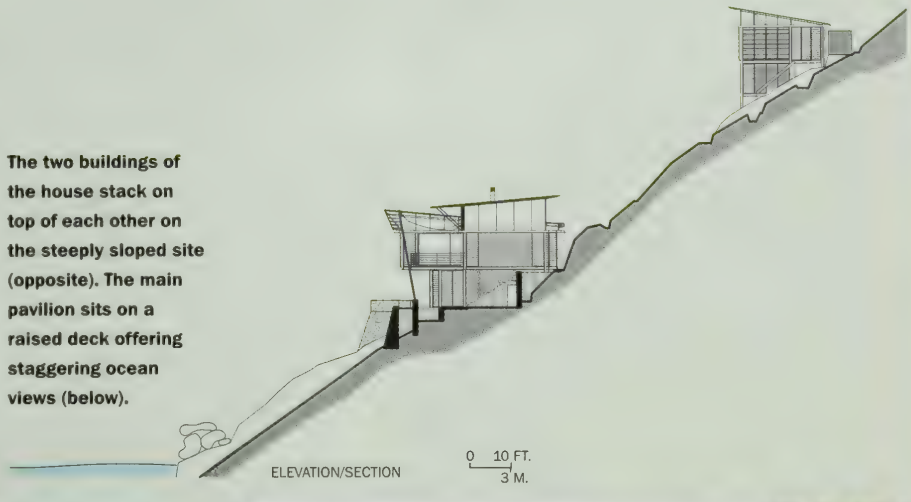
By Christopher Moore

A mollusk-encrusted pier is the visitor's sole introduction to Great Mackerel Beach, the address of the James-Robertson House by Dawson Brown Architecture. Although located not far from the center of Sydney, Australia, this secluded hamlet of fifty or so houses is in a world of its own. The pier is the only point of ingress—endless acres of impenetrable national park behind the houses deny any road access at all.

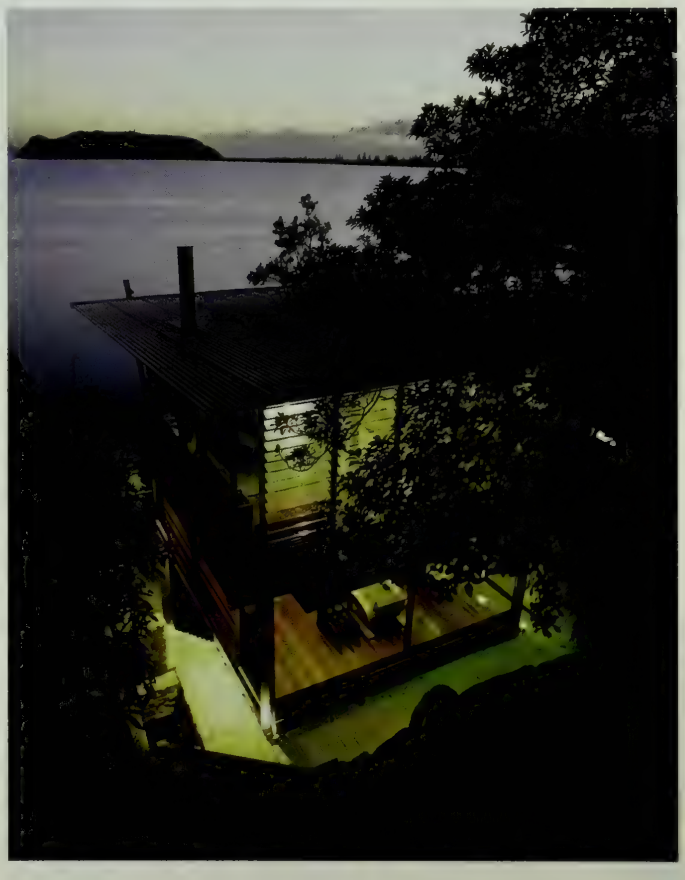
Architect Robert Brown and his family live at Great Mackerel Beach themselves, and clients Marcia and Dougal James-Robertson are neighbors who got to know Brown while spending weekends in an existing shack on their property. Eventually, the couple commissioned Brown's firm, Dawson Brown Architecture, to design a house more suited to permanent residency—a house without termites and without a giant python living in one of the walls.

A short stroll along the beach leads to a narrow path that winds up through fortresslike sandstone foundations. These retaining walls secure the site, sloped at 45 degrees, and provide a sturdy plinth for the all-steel house. The inherent drama of the rocky site and the disarmingly open program (a few key words written on the back of an envelope) imbued this project with a culture of architectural experimentation and engineering derring-do. Brown pauses at the stone base to explain that every single part of the building, except the stone that was cut from the site itself, had to be ferried over by boat or dropped in by helicopter. He likens the design to that of a biplane, the structure as minimal and rational as possible.

The project includes two discrete, steel-framed, double-story pavilions that are anchored to the site via vertical members embedded in the rock. The lower pavilion contains guest bedrooms and a bathroom downstairs, and an upper-level kitchen/dining and living area reached via external stone stairs. Exterior materials have been juxtaposed in an assured manner—corrugated copper walls and eaves abut the painted steel uprights, separated by a strip of stainless steel to avoid galvanization. All the steelwork is painted black, which helps the building visually recede



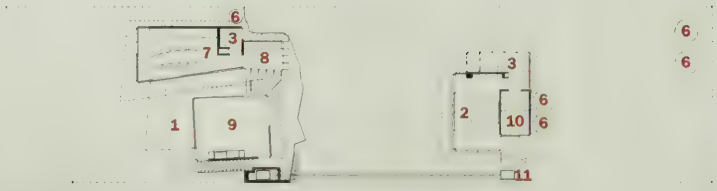
The two buildings of the house stack on top of each other on the steeply sloped site (opposite). The main pavilion sits on a raised deck offering staggering ocean views (below).



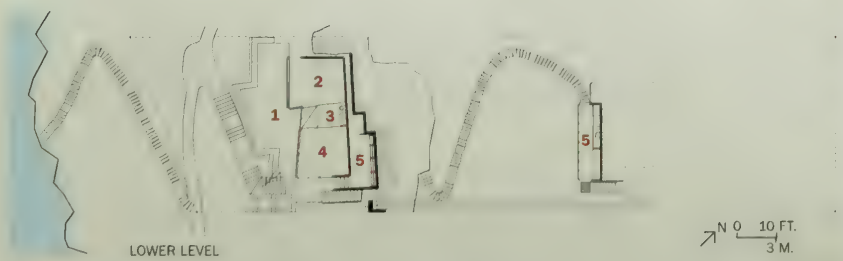
Christopher Moore is a Melbourne-based design and architecture writer and a regular contributor to Houses, *the Australian contemporary residential magazine.*

Project: *James-Robertson House, Great Mackerel Beach, New South Wales, Australia*
Architect: *Dawson Brown Architecture—Robert Brown, principal; Aaron Cook, Hernan Alvarez, project team*
Interior and furniture design: *Caroline Casey*
Consultants: *Murtagh Bond (engineer); Bangalley Earth and Waterscapes (landscape)*
General contractor: *Bellevarde Constructions*

1. *Deck*
2. *Bedroom*
3. *Bath*
4. *Study*
5. *Laundry*
6. *Water tanks*
7. *Kitchen/dining*
8. *Pantry*
9. *Living room*
10. *Closet*
11. *Inclinator*



UPPER LEVEL



LOWER LEVEL





Framed in glass and steel, the dining and living rooms occupy the second floor of the lower pavilion (opposite two). Steel walls create a layered effect on the lower level (above).

into the afternoon shadows when viewed from the water. The entire structure is exposed, down to the last bolt—very little of the steel fabricator's or builder's craft is concealed inside or out.

At the top of the stairs, a timber boardwalk runs close by the sheer rock face before turning left and out to a deck to embrace postcard-perfect views. This part of the house is a platform, raised about a foot off the ground so that native creatures (including the 6-foot-long lizard that chased the clients' Wheaten Terrier down to the beach) and runoffs from summer rains may continue their passage undisturbed.

Standing on the deck, one may observe how the living room and kitchen have been designed as separate entities, joined only by the central timber walkway. The wide, browlike steel eaves and copper roofs shielding both pavilions overlap without touching, the roof of the double-height living space hovering over the raked skillion of the kitchen. The two rooms are encased in large sheets of glass held in place by very fine steel frames and diagonal supporting cables. There are only two solid walls—one in the living room, which houses the fireplace and steel-mesh-fronted storage units; and another in the kitchen, which provides the anchor for a stainless-steel bench and integrated appliances. These solid elevations also screen neighboring houses. In the glazed sections, panels slide back to open these rooms out to the central walkway and deck.

The owners make a nightly journey via an open-air inclinator (a mechanical, chain-driven elevator) to transport themselves from the lower living pavilion to their private domain, farther up the hill. This secondary pavilion echoes the structural program of the main building, with black steel columns rising from the rock to give form to the main bedroom and bathroom upstairs, and laundry and storage below. Nearby tanks collect rainwater for general household use, and above-ground pipes take treated waste water and sewage and distribute it back into the garden.

The clients recall the gradual process of becoming acclimated to this small, but heroic, house, a world away from their former home, an inner-city apartment. A feat of engineering and construction bravado, it breaks down indoor-outdoor conventions and harnesses the elegant, unobtrusive strength of steel to provide rewarding living spaces while quietly embracing the surroundings. ■

Sources

Flooring: *Australian Architectural Hardwoods*
Lighting: *Inlite (exterior/interior); ECC Lighting (wall uplights); The Design Coalition (fiber-optic light and mast)*
Windows: *John Waters Industries; Baymill Distributors*
Stainless steel: *Stainless Steel Products; Paul Minter Rigging*
Bathrooms: *Britex Stainless Steel; Gosford Stone and Terrazzo*
Heating: *Floorheat; Jetmaster*

For more information on this project, go to Residential at **www.architecturalrecord.com.**

The valiant trees of the site define the life of the house, an antidote to the routines of introverted city living. It sits like an observation deck for viewing the natural setting, rather than a stationary object in a domesticated space. Occupants are exposed to ample light, and to the moods and rhythms of the landscape (this page). The house is entered via a long bridge that terminates at a center-pivoting, red-stained wood door (opposite).



WPa designed **Villa Lucy** both to meld with the wild terrain and peer out like a lookout at cliff's edge

By John Pastier

Seattle architect Anthony Pellecchia grew up in Hoboken, New Jersey, a densely populated city like its neighbor New York. His mother had resided there all her life in brick row houses. Last year, he built his first weekend house in a fir, cedar, madrona, and alder forest, on a bluff overlooking the waters of the Strait of Juan de Fuca, situated in the Pacific Ocean off the coast of Washington. He named it Villa Lucy to honor the parent who never got to live in such scenic surroundings.

Unlike many of his neighbors, who cut down trees to maximize their water views and create suburban lawns, Pellecchia kept his piece of forest and also preserved natural rainwater runoff patterns by building on stilts. While the house defers to its 6-acre natural setting, it does so within a rational sensibility. It's not a typical western Washington exercise in romantic woodsy regionalism bristling with eaves and gables, but a precisely formed, nearly flat-roofed, crisply detailed rectangular Platonic solid.

The steel frame raises the 1,400-square-foot house so the ground can slope largely untouched below it. Likewise, a steel entry bridge hovers above grade, leading to a large, square, center-pivoted red-stained wood front door that provides the sole color accent in an otherwise subdued palette. This Russian Constructivist–derived splash of red was a family decision undertaken with the architect's spouse and business partner, Kathy Wesselman, a graphic designer in their firm, WPa (Wesselman Pellecchia Associates). Another family member, the architect's son Aran, was the general contractor and chief carpenter.

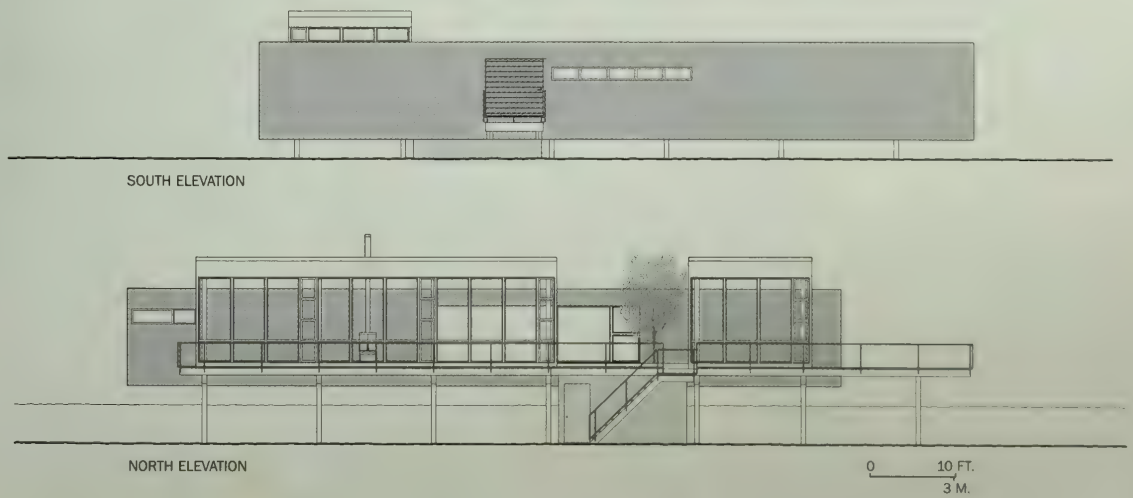
With its 13-foot 4-inch bay window size and several other dimensions determined by standard lengths of building materials, Villa Lucy embodies a completely modular piece of design and construction. Pellecchia calls it a "glass-box loft" and a contemporary version of a Case Study House, referring to the extensive demonstration program of Modern houses sponsored by *Arts and Architecture* magazine in California from 1945 to 1966. He says that it could have been designed in the 1960s.



Early in his career, Pellecchia worked in Louis Kahn's office. Villa Lucy's plan embodies Kahn's principle of clear differentiation of served

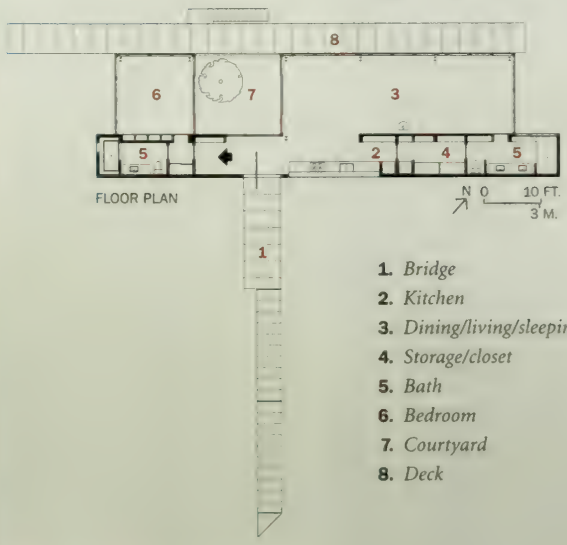
John Pastier is a Seattle-based architecture critic and design consultant.

Project: *Villa Lucy, Strait of Juan de Fuca, Washington*
Architect: *WPa—Anthony Pellecchia, designer and partner in charge; Anthony Goins, project architect*
Engineer: *Dayle Houk & Company (structural)*
General contractor: *Aran Pellecchia Construction*





The main public space of the house includes a dining area, a kitchen, and counter seating separating the two.



FLOOR PLAN

1. *Bridge*
2. *Kitchen*
3. *Dining/living/sleeping*
4. *Storage/closet*
5. *Bath*
6. *Bedroom*
7. *Courtyard*
8. *Deck*

and servant spaces. Pellecchia also worked for Robert Venturi, but no trace of his design approach is apparent in the house. The main areas—guest room, dining, living, and sleeping zones—form a broad band on the north portion of the house, while support functions such as storage, bathrooms, kitchen, pantry, and dressing area occupy a narrower parallel band to the south. A concrete cube located below a landscaped outdoor courtyard that separates the guest quarters from the rest of the house accommodates the utilities.

The house features a steel-and-wood hybrid structural system. Six welded steel moment frames provide seismic resistance while carrying the floor, roof, and external balconies and walkways. Wood truss joists form a secondary structure, and flooring for the extensive balcony, entry bridge, and cantilevered viewing deck is industrial grating that allows rainwater to drip into the ground. (A future exterior stair will also be built of this grating.) Outer walls are floor-to-ceiling glazing; whatever isn't a window wall or clerestory is clad in smooth beige-stained cedar.

THE ARCHITECT NAMED THE HOUSE VILLA LUCY TO HONOR HIS MOTHER, WHO NEVER LIVED IN SUCH SCENIC SURROUNDINGS.

Exterior steel columns and balcony guardrails have been left to rust naturally, but the columns within the living spaces were hand fin-

METALWORKS® Steel Shingles make the look last.



Three timeless looks. One timeless material. METALWORKS Steel Shingles by TAMKO offer homeowners a compelling combination of lasting beauty and protection. Call us, or visit us on the Web, for more information.



METALWORKS
STEEL SHINGLES
TAMKO ROOFING PRODUCTS
1-800-641-4691
www.metalworksroof.com
www.tamko.com

Roof on house is AstonWood™ in Sierra Slate Grey.
For information regarding, or to receive a copy of, TAMKO's limited warranty, contact your local TAMKO representative, visit us online at www.tamko.com, or call us at 800-641-4691.

Representation of colors is as accurate as our printing will permit.
2005 TAMKO Roofing Products, Inc.

CIRCLE 77 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The house perches on top of a cliff open to nature (above). The living room, a simple space sheathed in floor-to-ceiling glazing, is exposed to the forest view (below).



ished with black shoe polish. Horizontal stainless-steel cables form much of the guardrail assembly, and a large L-shaped piece of aluminum above and to the left of the red door projects 2 feet to form an entrance canopy and wind buffer.

The blending of wood and metal at Villa Lucy can be seen as a metaphor for the house in its surroundings—it is an unapologetically rational, precisely shaped object that's deferential and complementary to its organic setting. It slips into the voids of the woodland, leaving nature essentially intact. Ironically, the more common local vacation house typology—a woodsy, romantic, retro-Craftsman regionalist essay built closer to the bluff escarpment on cleared and sodded land—is far less environmentally sensitive, despite its warm, fuzzy imagery. For all its East Coast roots, Villa Lucy achieves Northwestern regionalist goals through simple, almost Minimalist means. ■

Sources

Exterior cladding: *LC Cedar Company (wood)*
Roofing: *AEP SPAN (metal)*
Windows: *Milgard (aluminum)*
Glazing: *Milgard*
Doors: *Aran Pellecchia Construction*
Cabinet hardware: *Blum*
Cabinetry: *Henry Built*
Paints/stains: *Cabots*
Paneling: *Comton Lumber*
Chairs: *Living; Aalto; Herman Miller*
Wood burning stove: *Rais*
Plumbing fixtures: *Kohler; Rohl*

For more information on this project, go to Residential at **www.architecturalrecord.com.**

WATER DELIVERY ENHANCED.

METICULOUS CRAFTSMANSHIP.
THE FINEST MATERIALS.
FAUCET, ACCESSORY AND LIGHTING ENSEMBLES.
ENHANCE YOUR SPACE, AND MAYBE YOUR SOUL.

DESIGN BY VICTOR HOERNIG, IDSA

CIRCE™

SENSUALLY CLASSIC.



GINGER®

T. 866.423.0955 WWW.GINGERCO.COM F. 803.547.6356

© 2005 GINGER® a Masco Company

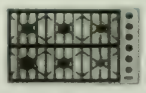
CIRCLE 78 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Form follows function into

every corner of the Viking kitchen.



Viking products look beautiful. But rest assured, plenty  of substance lies beneath those gleaming exteriors. Viking originated professional performance for the home. And







1-888-845-4641 or vikingrange.com

CIRCLE 79 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Kitchen & Bath Portfolio

At once practical and whimsical, the kitchens and baths selected for this year's Portfolio welcome us into their bright and well-crafted spaces without imposing on the rest of the residence. These open areas serve double-duty as both workhorses and beauty queens. *Rita Catinella Orrell*

A kitchen "light box" and bathroom "lanterns" serve as beacons in a New York City loft

62 Cooper Square, constructed in 1926 for renowned music publisher Carl Fischer, now serves as a luxury residential building in New York City's Astor Place neighborhood. Desai/Chia Architecture recently converted 5,000 square feet of the seventh floor into a permanent home for a young, growing family. Wrapped with windows on three sides, the condo's design sustains the industrial feeling typical of city lofts, yet approaches the layout in a novel way.

"Maintaining the sense of the flow of light was one of [the clients] goals," explains Chia. With that in mind, the firm wanted the bathroom and kitchen spaces in particular to feel luminous both day and night.

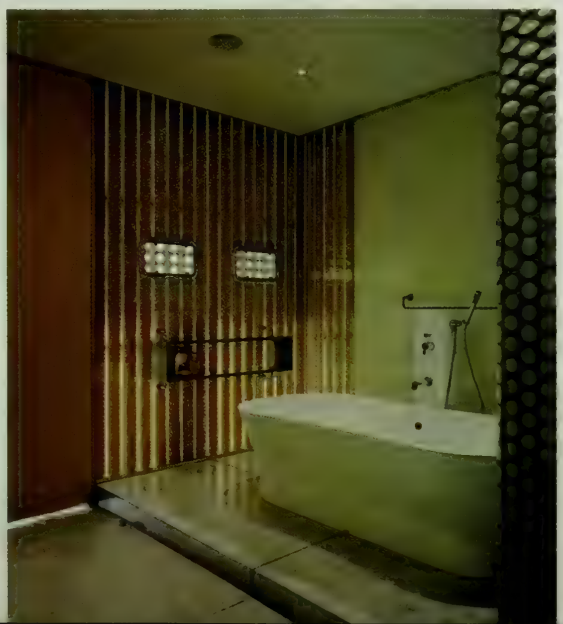
The apartment is anchored spatially by two cores sheathed with a sleek wood-and-glass skin: One core houses the private bathrooms, the other a guest bathroom and home office space. Rather than fit the bathrooms in solid boxes in the center of the loft, they work as "lanterns" in the space. The bathrooms feature an offset solid-ash-wood slat system that is constructed to allow light to penetrate while blocking direct views. The clear glass on the inside not only lets in light, but also serves as a waterproof membrane, acoustical barrier, and structural surface for hanging towel bars, storage boxes, and operable portholes that the architects found through a Dutch sailing company. Round openings cut into the glass-and-wood slat system allow for ventilation and views from within the cores when the portholes are open.

Serving as the hub of family life for the client, the kitchen features a 9'-long, cantilevered island that can be used for food prep, homework, or as the setting for a casual dinner party. The team worked with a structural engineer to create a bridge truss system beneath the cantilevered section. Concealed lighting along with a variety of reflective, transparent, and translucent materials in the kitchen dematerialize the surfaces of the room. "It's kind of an architectural piece," adds Chia of the kitchen, "and that's what they like about it." The apartment has proved to be popular with more than just the clients—it was awarded an AIA/New York Design Award last fall. *R.C.O.*



A clear glass soffit in the kitchen (left) exposes the air-conditioning duct and acts as a large light box. The translucent, transparent, and reflective materials prevent the room, a hub of activity, from dominating the surrounding open areas of the loft. The walls of the loft's three bathrooms (two shown below) let light flow in and out of the spaces through a custom glass-and-wood slat system.

Architect: *Desai/Chia Architecture—Kathy Chia, Arjun Desai, Philip Kerzner, project team*
Contractor: *Giovannitti*
Sources: *Dornbracht, Agape, Vola (plumbing fixtures); Wolf (cooktop, oven, microwave); Sub-Zero (fridges); Bosch (dishwasher); Nulux (lighting)*









Exposed beams supporting the roof contrast with the stainless-steel surfaces of the kitchen (left and above), while natural light floods the bath (below), displaying the connection between fixtures and structure.



Material consistency enhances a naturally elegant residence in the woods of Idaho

According to Jim Cutler, as an architect he is always striving "to make things fit appropriately into their circumstances." Tanglefoot, a house in the pristine forest of northern Idaho designed by his firm, Cutler Anderson Architects, evolved from the concept of material integrity. The design reveals structural connections and allows each material to resonate at its true frequency.

"Every material, every piece of wood had some voice in that building," says Cutler of his scheme. The wood frame of the house is left exposed, set off from the exterior envelope of window glass and outer walls. Inside, each of the beams that stretch to the ceiling in an intricate web are integral to supporting the roof and its annual snow load.

In contrast to the internal "forest" of fir beams that support the house, the all-stainless-steel kitchen stands out like a creature alighted from outer space. In fact, that was the architect's intent. The kitchen, a room filled with imported metallic machines, is literally elevated 6" on a stainless-steel platform. The stainless-steel appliances, sinks, cabinets, and fixtures assert their alien relationship to Tanglefoot's woodsy setting while reflecting the glow of the maple cabinetry that fills the two adjoining breakfast nooks.

In the master bath, as in the rest of the house, the structural frame dominates. Slender metal tubes connect lights and switches in utilitarian simplicity to the larger electrical infrastructure of the building, visually illustrating how the system works. The stainless-steel "horse trough" tub was designed by Cutler on request from the clients after they witnessed his mastery of the material in the kitchen. Contrary to many scenarios where the architect's design is constricted by budget and time limits, Cutler was actually encouraged by his client—an inventor—to push the concept as far as it would go. The result is a light, airy volume of pure elegance. *Larissa Babij*

Architect: *Cutler Anderson Architects*
Contractors: *Tanglefoot Master Builders; Humble Homes*
Structural engineer: *Coffman Engineers—Craig Lee*
Sources: *Traulsen, Viking, Bosch (kitchen appliances); Tipke Manufacturing (sleigh tub, sink brackets, frame); Wirsbo (thermostats); Appleton (switches, outlets)*

Bathrooms in a Tucson home offer serenity through a minimal, spa-influenced design

"Out of clutter, find simplicity," reads the Albert Einstein quote on the Web site of Ibarra Rosano Design Architects. Perhaps this was the motto the team followed when they worked on the Winter residence in Tucson. Ibarra Rosano was originally hired to remodel the clients' cluttered master bathroom, but once the renovation began, it became clear that the entire house needed updating.

Formerly a nondescript 1940s brick house with a circulation-driven program and limited natural light, the Winter residence was transformed by the architects' decision to open up the walls and ceiling. This coincided with the clients' desire to have a house that encapsulated the aesthetics of boutique spas and hotels they had visited around the world. Room by room, the architects exposed the house to daylight and incorporated a series of courtyard gardens in the circulation.

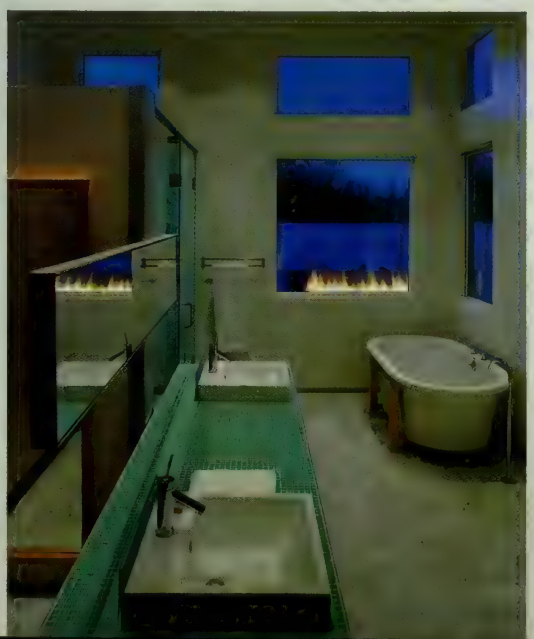
This principle of eliminating unnecessary walls in favor of spare, crisp spaces was particularly applied to the bathrooms. Originally dark and cramped, the master bath is now airy, with sunlight filtering through several windows. The architects removed a dividing wall between the master closet and bath to enlarge the area for changing and dressing. At the bathroom's center is a vanity cabinet and cantilevered horizontal mirror that appear to float above the floor. The vanity also functions to separate the dry areas from the ones designated for bathing.

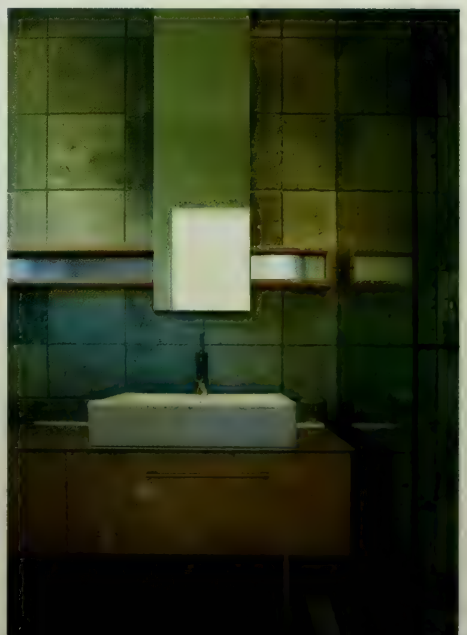
To create a calm atmosphere resembling that of a spa, the architects kept the detailing as pared down as possible. All the bathrooms feature a similar palette of materials and colors: tumbled-marble floors, glass and tile in shades of blue and green, and maple plywood cabinets with aluminum handles.

The design team provided plenty of storage space to keep the bathrooms tidy, and although the house may be simpler and less cluttered now, it has also gained a level of complexity. *Diana Lind*



Architect: *Ibarra Rosano Design Architects—Luis Ibarra, principal designer*
Contractor: *Repp Design + Construction*
Sources: *Mark Perry (custom cabinets); Bisazza (mosaic glass tile); Duravit (sink basins); Hansgrohe (faucets); tumbled Carrara marble (flooring); Abbot Metals (custom cantilevered mirror)*





All of the bathrooms in the house have a similar palette of materials and colors. The master bath features a custom cantilevered mirror (above), as well as several exposures for natural light (left). The architects kept the detailing minimal in the guest bathrooms (right).

Kitchen & Bath Portfolio

Professional chef's kitchen is ideal setting for work and play

When construction crews were poking around behind a Sheetrock wall in order to run electrical wires into the renovated New York City apartment of chef and television personality Tyler Florence, they discovered something serendipitous: a brick wall that had once been the exterior of the building next door that bore the remnants of a painted advertisement. Time was running short to complete the project: Besides being Florence's residence, the apartment was to serve as a set for his new show, *Tyler's Ultimate*, and filming was weeks away. Florence initially wanted to push through with the original design, but something nagged at him, and he called architect Thomas C. Lekometros, the principal of the New York City office of The Lawrence Group Architects.

"Leko," Florence said, "if you think there's something cool back there, then we have to take down that wall."

Much of the design process for the space was a balance of excavation and additions that would not feel too jarringly modern. To play off the rough feel of the newly discovered brick wall, Florence and Lekometros selected a handmade green tile for the back wall of the kitchen that it faces. The slightly uneven tiles are set off by sleek blue cabinets. The countertops came from an industrial-stainless-steel manufacturer two doors away from the apartment. Florence asked for open shelving rather than cabinets above the countertops, which resulted in the pie shelf and meat rack that line the wall. The meat hooks serve as a pot rack.

As a professional chef, Florence had established a working relationship with Viking, which allowed him to select the appliances he needed to outfit the kitchen, as well as a grill for his outdoor terrace.

The loftlike, open nature of the kitchen has allowed the Food Network to film in the space with no trouble, and has helped Florence keep to his philosophy, as Lekometros describes it, "that live and work and play are all the same thing." *Kevin Lerner*





Architect: *The Lawrence Group Architects, New York—Thomas C. Lekometros, principal; Tim Wynter-Stoner, associate in charge*
Contractor: *Richmond Remodeling and Construction—John Orgera*
Sources: *Ann Sacks (wall tile); Viking Range (appliances); IKEA (cabinets); Master Kitchen Supplies (custom stainless steel); B4 It Was Cool Antiques (cutting-board table)*

The kitchen (above and right) has the custom functionality required by a professional chef, along with the stage presence needed for the set of a television show.

Axor® Starck.
The Discovery of Simplicity.

AXOR

hansgrohe



With Philippe Starck's unique bathroom vision, beauty doesn't need embellishment to be striking and timeless. The Axor Starck collection perfects minimalism and allows us to relax without distractions. The collection features a wide selection of products to create your perfect bath environment—from the two-handle design and stylish showers to wall-mounted faucets and universally appealing accessories. See the entire Axor Starck collection at **www.hansgrohe-usa.com**, or call 800-334-0455 to add the serenity and purity of Axor Starck to your home.

CIRCLE 80 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Kitchen & Bath Portfolio





Creating a new Modern vocabulary for the intimate spaces of an East Hampton residence

Architect Denise Scott Brown may have coined another great term when she described the mélange of architectural modes in Michael Haverland's design of an East Hampton house as "Survival Style." She was referring to the phrase "survival of the fittest," and suggesting that the styles featured in the house comprise only the most evolved design elements of the 20th century. Haverland, who previously worked for Brown, managed to incorporate these historic influences throughout the residence without being derivative; in fact, the result is an original approach to the aesthetics of the Modernist era.

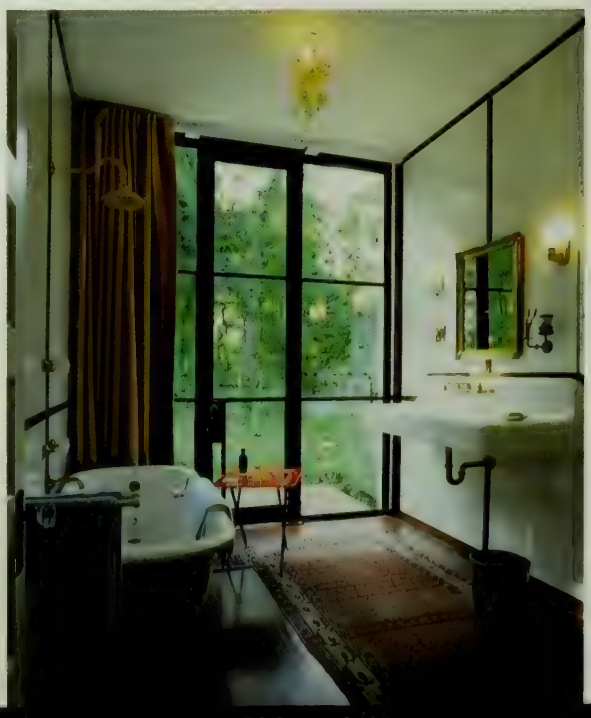
The kitchen is a good example of the mixing and matching of design elements. The facade's glass and steel are offset by the warmth of cabinets within inspired by French decor of the 1940s and adorned with decoupage botanical prints. In contrast to the usual industrial look of Viking appliances, here the full suite, from oven to refrigerator, is a creamy tone of "Lemonade." Other subtle subversions of the house's Modernist structure include pendant lights and a crystal chandelier that moderate the scale of the high ceilings. Wood flooring echoes the landscape that can be seen outside the kitchen's wall of windows.

More than just eclectic design aligns the kitchen and baths: They are all located at the back of the house's service area. However, these spaces are not meant to be hidden. The bathrooms, with curtains, wallpaper, and oriental rugs, have the feel of larger rooms. Like the kitchen, they feature old sinks, and one contains a claw-foot tub. No opportunity to add detail was missed—even the bathrooms' brass fixtures were stripped so that they could patinate in the salty air of Eastern Long Island.

In describing his intentions for the design of this residence, Haverland said he wanted "to do something between modern and traditional." The project certainly fits within those parameters, but one can see why this house requires a new vocabulary to accurately describe it. *D.L.*

Architect: *Michael Haverland Architect*
Contractor: *DM Design*
Interiors: *Philip Galanes*
Structural engineer: *Robert Silman Associates—Joe Tortorella*
Sources: *Olde Good Things (antique chandelier, kitchen farm sink, bath sinks); Pierre-Joseph Redouté,* The Lilies *[Taschen, 2000] (decoupage botanical images); salvaged marble (island top); Fornasetti (bathroom tray/stand); Viking (cooktop, oven, microwave, fridge, dishwashers)*

The modern kitchen (above two) is intelligently anachronistic, with an old farm sink, salvaged-marble island top, and botanical prints. The main bathroom creates the ambience of a larger room (below).





LANCOPRECISION Super Single Bowl with Master Gourmet faucet

BLANCO

THE CORNERSTONE OF EVERY GREAT KITCHEN

Available at better plumbing wholesalers and decorative plumbing showrooms

800.451.5782 • **www.blancoamerica.com**

Stainless Steel Sinks • Silgranit® Sinks • Kitchen Faucets • Bar Sinks & Faucets • Custom Sink Accessories

CIRCLE 81 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Kitchen & Bath Portfolio

A dialogue of eras in the kitchen and bath of an architect's San Francisco Victorian

When people first come to architect Anne Fougeron's house, an 1890s San Francisco Victorian, they often hesitate to use the bathroom. It's separated from the kitchen by a translucent wall of laminated glass, which allows light—as well as silhouettes—to be transmitted between the rooms.

"My house is south-facing in the back, so it gets really good sun, and Victorian houses are dark in the middle," she said. "So I wanted to open up the back of the house as much as possible."

The sleek and clean-lined kitchen and bathrooms contrast with the original structure in what Fougeron calls "a dialogue between old and new." In Victorian times, the owners didn't spend much time in those spaces, so she didn't feel the need to design something historical. She also adds, from a design standpoint, "I don't do Victorian."

Fougeron says her houseguests are no longer intimidated by the design. "I like to have dinner parties and have people over," she said. "But the kitchen also a place my daughter and I can eat during the week, just the two of us. I can't get guests into my living room anymore." *K.L.*

Architect: *Fougeron Architecture—Ann Fougeron, AIA, principal in charge; Russ Sherman, Michael Pierry, Todd Aranaz, project team*
Contractor: *Young & Burton*
Sources: *Bulthaup (kitchen cabinets); Benjamin Moore (paints, stains); American Terrazzo (epoxy terrazzo flooring); Sub-Zero (fridge); Gaggenau (stove); Miele (oven)*







The view from the deck at night showcases the kitchen—a silhouette is visible on the glass wall adjoining the bathroom (left). The south-facing kitchen lends light to the guest bathroom (bottom two).



Maximum VALUE through Superior SERVICE



AVOID BACK INJURIES

EVERY DOCK NEEDS A LIFT

An Advance dock lift is the only equipment that can service all trucks. Full line of dock lifts including:

- Portable
- Top Of Ground
- Pit Mounted



INCREASE PRODUCTIVITY



Call 1-800-THE-DOCK or visit our web site www.advancelifts.com for a FREE CATALOG.

ADVANCE LIFTS

DOCK LIFTS

CIRCLE 82 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





A narrow stainless-steel refrigerator fits inside one of the custom rolling cabinets (far left). The architect custom-designed many features in the apartment, including the laminated glass panels (near left) and the bathroom's cast "waterfall" sink (right).



An Ottowa apartment flows with the custom creations of its owner-architect

From the handheld shower and drainable wood-slat floors in the entryway to the removable wooden chaise in the poured-concrete bathtub, the theme of water flows through architect Paul duBellet Kariouk's Ottawa apartment. At the center of this is the sculptural faucet that breaks the flat plane of the kitchen counter—one of the few design elements that does not move.

Linen-backed glass panels slide across the windows. A desk can be rolled to extend the countertop. The cabinets roll and attach to the ceiling for electricity. Even the refrigerator is on wheels.

"A lot of times people play with the ideas of moving systems, and they stay in one place forever," Kariouk said, "but that's not the case here; they really do get moved all the time."

The design sprang from practicality. For instance, the movable units allow him to use his apartment as an office, and the glass wall laminated with red silk behind the bathtub conceals a service column that could not be relocated.

The shower in the entryway also plays a practical role in snowy Ottawa: "A 120-pound dog covered with slush and grit isn't necessarily the happiest fit with high design," explains Kariouk. *K.L.*

Architect: *Kariouk Architecture—Paul duBellet Kariouk, principal; Chris Davis, job captain; Adam Frankowski, assistant*
Contractor: *Ralph Lawrence Construction*
Sources: *Neoform Cabinetry (kitchen millwork); Vola (dog-shower fittings); Grohe (kitchen fittings); Bosch (cooktop, oven); Miele (dishwasher); Liebherr (fridge); custom by architect (rolling cabinets, floors, laminated glass, bathroom sinks)*





Heat And Excessive Sunlight Can Be Harsh And Unappealing.

People are drawn to the diffused natural light enhanced by a Major Industries Guardian 275® Translucent Daylighting System.

MAJOR INDUSTRIES

Call or e-mail today for your FREE daylighting catalog.
knelson@majorskylights.com

Toll Free 888-SkyCost
www.majorskylights.com

CIRCLE 83 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



VISUAL AND VERSATILE.

Arena Plus shelves, in white or maple finish, have non-slip bottoms that prevent items from sliding when the cabinet is pulled open. Now that's pretty slick.

hafele.com
1-800-423-3531

HÄFELE
ANSWERS

CIRCLE 84 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



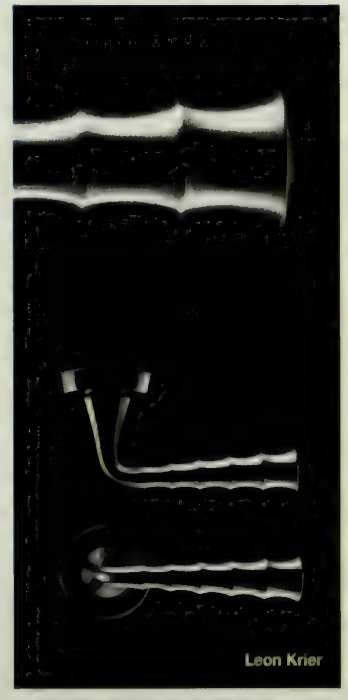
Maniglie
Accessori del mobile
Arredobagno

vcr
Valli&Valli

www.vallievalli.com



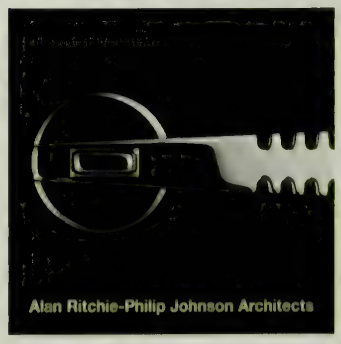




Maniglie d'autore

Eero Aarnio
Ron Arad
Gae Aulenti
Mario Bellini
Cini Boeri
Achille Castiglioni
Cerri & Associati
David Chipperfield Architects
Antonio Citterio
Droog Design-Ronald Lewerissa
D'Urbino-Lomazzi
Foster and Partners
Massimiliano e Doriana Fuksas
Frank O. Gehry
Michael Graves
Gregotti Associati
Hans Kollhoff
Yoshimi Kono
Leon Krier
Chi Wing Lo
Vico Magistretti
Angelo Mangiarotti
Richard Meier
Renzo Mongiardino
Jean Nouvel
John Pawson
Gustav Peichl
Piano Design Workshop
Andrée Putman
Alan Ritchie-Philip Johnson Architects
Aldo Rossi
Sottsass Associati
Taller Design Ricardo Bofill
Matteo Thun
Marco Zanuso

Fusital



Valli&Valli

Valli&Valli (U.S.A.) Inc.
150 East 58th Street, 4th floor
New York, NY 10155
Tel. (212) 326 8811
Fax (212) 326 8816
Toll free: (877) 326 2565
sales@vallivalli-us.com

CIRCLE 85 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Residential Products

Kitchen & Bath Show

The annual Kitchen/Bath Industry Show, held last May in Las Vegas, was the largest edition of the show to date. Among the trends to note: a greater selection of options in design, dimensions, materials, and pricing for products ranging from appliances to plumbing fixtures and fittings. *Linda C. Lentz*

▾ Steel washbasins shape up

Elkay has developed a line of semirecessed and vessel-style sinks dubbed the Asana Lavatory and Entertainment Collection. Fabricated from 18-gauge, type 304 nickel-bearing satin stainless steel, this handcrafted group is notable for its substantial edge, which can be specified with a mirror or satin finish. The line includes a counter-mount 15½"-diameter vessel, and semirecessed 20" x 12" rectangle and two 16" x 16" squares—one with a step-pyramid-shaped bowl. Elkay, Oak Brook, Ill. www.elkayusa.com **CIRCLE 200**



▾ "Cool" commercial-style food storage

Finally, there is a solution for those who want the look of commercial refrigeration in a model designed for a residential kitchen—minus the usual code and specification issues. The Sub-Zero Pro 48 not only possesses a restaurant-worthy 18.4 cubic feet of refrigeration and 11.4 cubic feet of freezing capacity, it is available in both freestanding and built-in versions that are available with or without a triple-pane, argon-filled glass refrigerator door. Constructed of 100 percent welded stainless steel inside and out, the Pro 48 is notable for its dual refrigeration system and three evaporators—a feature that allows for the setting of different temperatures in the two bottom refrigerator drawers. Sub-Zero, Fitchburg, Wis. www.subzero.com **CIRCLE 203**





▲ Stylish lineup

The Miele MasterChef Collection comprises built-in single and double convection ovens, speed ovens, steam ovens, built-in coffee systems, warming drawer, and Lift Doors (to hide small appliances) that align precisely no matter how they are stacked or configured. In black glass or stainless steel, the 24" appliances are available with stainless-steel trim kits to accommodate 27½"- and 30"-wide openings. Miele, Princeton, N.J. www.miele.com **CIRCLE 202**

▾ Aqua force redux

Topping overhead shower dimensions with an impressive 24" diameter, the Hansgrohe Downpour Air Rainmaker is outfitted with 350 spray channels. Integrating seamlessly into the ceiling, the shower offers five spray modes, including 12" and 24" air-infused Rain Air modes, three whirl-massage jets, and combinations thereof. A proprietary self-cleaning system ensures the channels remain free of debris and limescale build-up. Hansgrohe, Alpharetta, Ga. www.hansgrohe-usa.com **CIRCLE 201**



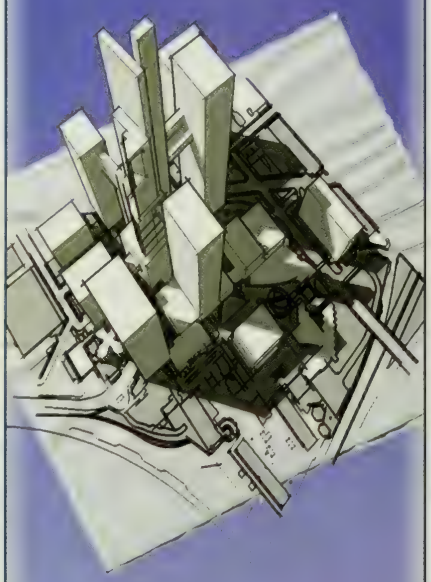


▲ Fitting pleasures

Notable for its streamlined linear profile and intelligent proportions, Dornbracht's new LuLu collection of faucets, fittings, and accessories by Michael Sieger was designed to attract a hipper, younger customer. Available in polished chrome and platinum matte, this softly curved group includes single-lever deck-mount (left) and wall-mount lav faucets, a floor-mount tub filler, and taps for bidet, shower, and bath. The wall-mount shelf, towel bar, and storage components are infused with a jolt of such high-wattage hues as green, magenta, or orange, plus a playful material mix of wood, porcelain, and glass. Dornbracht, Duluth, Ga. www.dornbracht.com **CIRCLE 204**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

LOVE SKETCHING ON NAPKINS?



SketchUp®

Award-winning!

SketchUp is a must-have 3D tool for busy architects. It's unique user interface allows for quick, easy 3D model creation, modification and presentation without a steep learning curve.

And... SketchUp works and plays well with CAD and multimedia applications!

Mac or Windows $495.

Macworld · Macworld Expo Show Floor · CADalyst · Editors' "Wow!"

Download your FREE trial:

www.sketchup.com

CIRCLE 86 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Residential Products

Kitchen & Bath Show

► Ebb and flow



Neo-Metro has developed a collection of console tables to complement its popular Ebb Basins—one-piece, 16-gauge stainless-steel drop-in or undermount units notable for their concealed drain openings and unique sizes that range from 19" to 38" wide with bowl depths of 2½" to 7". Topped in either clear glass or a selection of colorful resins with varying opacities (such as the subtly translucent Cranjuice model, right), the console frame is made of recyclable stainless steel and sports a clean architectural silhouette. To enhance the deck material's luminescent tendencies, the company recommends the installation of undercounter lighting, which is not included. Neo-Metro, City of Industry, Calif. www.neo-metro.com **CIRCLE 205**



◄ Bacchanalian keeping room

Engineered to install in a day, the GE Monogram Walk-in Wine Vault is ideal for serious oenophiles. At approximately 8' x 8' x 8', this insulated stainless-steel chamber maintains as many as 1,100 bottles of wine at a guaranteed cavelike humidity level and an optimum temperature for long-term storage. Its cutting-edge, 3,000-BTU cooling system is monitored electronically by a self-calibrating temperature probe to ensure consistent conditions, while an Inventory Management System keeps contents in check. The interior sports redwood racks, crown molding, white walls, and motion-detection halogen lighting. GE Monogram, Louisville, Ky. www.monogram.com **CIRCLE 206**

► Custom shower building blocks



As custom showers go, the Kohler WaterTile body-spray system is one of the most versatile—and creative—with its selection of near-flush-mount, 5"-square adjustable sprays designed to be installed in any number of configurations—on a wall or ceiling, solo or ganged in clusters—as body sprays or showerheads. A coordinating wall-mount showerhead is similar in design but wrapped in a curved, angled sleeve. Both are available in two spray intensities: a 54-nozzle spray for soothing water coverage and a 22-nozzle for a stimulating spray pattern. Finishes include polished or brushed chrome and nickel, brushed bronze, and French gold. Kohler, Kohler, Wis. www.kohler.com **CIRCLE 207**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



You've designed your own exposed connectors for years.

It's break time.

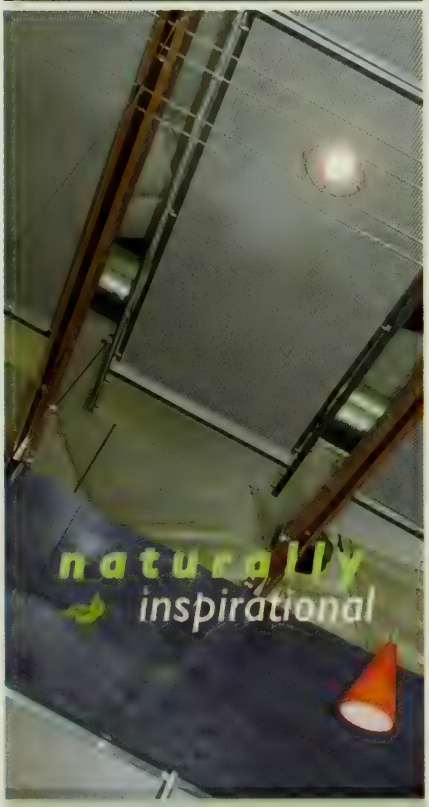
You've always had to custom-design connectors for exposed residential and commercial wood framing, then have them fabricated and finished. Now you can simply specify them. The new **Architectural Products Group** from Simpson Strong-Tie® offers a wide range of prefinished connectors that combine load-rated structural integrity with decorative architectural detailing. To see the full line visit our Web site, or call 866.860.9011 to learn more.

SIMPSON Strong-Tie™

www.ExposedConnectors.com/Details13

CIRCLE 87 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Móz
Decorative Metals
Custom Fabrication



Móz Decorative Metals are 80% post-industrial Recycled Aluminum. Contributes to LEED 2.0 MR Credit 4 - Recycled Content

10 Unique patterns
16 Standard colors

WE ENGINEER, BUILD & INSTALL

510.632.0853
www.mozdesigns.com

Residential Products

Kitchen & Bath Show



◄ Vanities with flair

A noteworthy source of tile and stone, Walker Zanger has enhanced its bath appeal with a luxurious collection of vanities in styles including American Neoclassic, Hollywood Regency, Art Deco–inspired, Asian-influenced, and contemporary. The bases, made from solid hard woods, nickel-plated brass, stainless steel, and antiqued bronze, are topped with the company's marble and limestone. Each has been fitted with practical storage solutions. The modern Scala Wash Stand Noir (left) features an integrated sink top carved from a solid block of marble. It is available with a Statuary White top on an espresso-finished solid oak base or with "Walnut" Travertine on solid walnut. Walker Zanger, Sylmar, Calif. www.walkerzanger.com **CIRCLE 208**

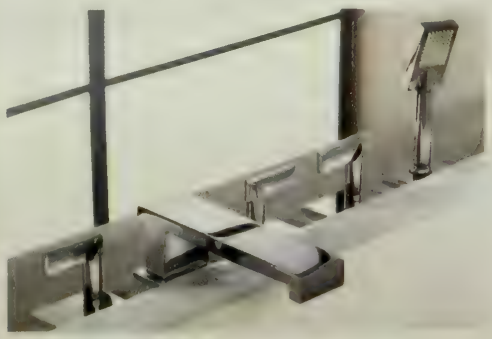
► Couture de cuisine



To satisfy popular demand in addition to a wide variety of installation requirements, KitchenAid has added a line of French Door bottom-mount refrigerators to its Architect Series. These include 36" freestanding and counter-depth models, as well as a sizable 42" built-in. Preferred by designers for its narrow refrigerator door swing, the French Door style is prized by cooks and entertaining enthusiasts for its full-width top refrigerator, which allows for storing items such as serving trays and baking pans. Both the freestanding and counter-depth models will be available beginning summer 2005 in stainless steel, black, and white. Following in early 2006, the new 42" built-in model will be offered in stainless steel with the signature curved Architect Series handles or with the ability to accept custom overlay panels. KitchenAid, Benton Harbor, Mich. www.kitchenaid.com **CIRCLE 209**

▼ Luxurious line extensions

To supplement its popular and comprehensive offering of bath accessories, lighting, and mirrors, Ginger has moved into the realm of plumbing—a new venture for this established company. The modern and urbane Surface exhibits the same elegantly contemporary lines as the original decorative pieces that were introduced a year ago. Made of solid brass, its components feature neat mitered corners and include lavatory and bidet faucets, Roman bath sets (left), thermostatic showers, pressure-balanced showers, rainfall-sensation showerheads, hand showers, and body sprays—all finished in either polished chrome or satin nickel. Circe, a contemporary interpretation of a traditional design, is available in satin nickel, polished brass, polished chrome, or oil-rubbed bronze. Ginger, Fort Mills, S.C. www.gingerco.com **CIRCLE 210**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

It's defined as modern, but its sophistication is timeless.



Architectural
BA72X

ROHL
MODERN

Clean lines and simplicity define the Modern Bath Collection from ROHL. This stunning collection is comprised of two distinctly stylized series. Cones, curves, cylinders and points create the design interest of the Minimalist series. The Architectural series, designed by world-renowned architect Giampiero Peja, is marked by meticulous detail in a new wave of modern style—clearly punctuated by its generously proportioned cross handles shown here. Finish your modern décor with the Modern Bath Collection from ROHL. See more at www.rohlhome.com or visit a dealer showroom near you.



Architectural
BA108X

Minimalist
R2003LM

Minimalist
R2006XM

Offices In: New York • San Francisco • Newport Beach • Milano
Sold exclusively through fine decorative plumbing and hardware showrooms nationwide

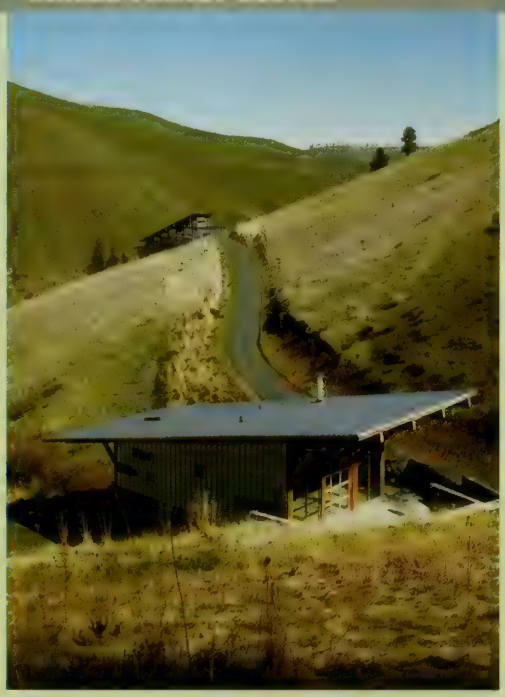
1 800 777 9762
www.rohlhome.com

ROHL
The Experience of Authentic Luxury™

CIRCLE 88 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

The American Institute of Architects Announces the 2005 Housing PIA and HUD Awards for Design Excellence

SINGLE-FAMILY CUSTOM



Project: *The Canyon House*
Location: *Julietta, Idaho*
Architect: *Paul Hirzel Architect*
Client: *Ken and Jean Campbell*

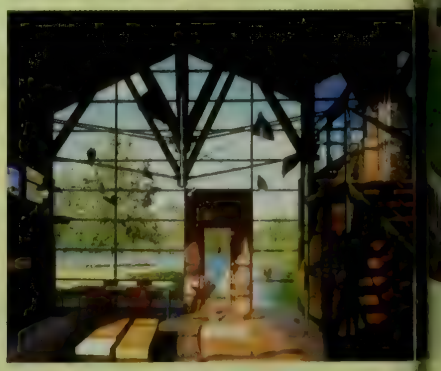
Two buildings make up the Canyon House—the bunkhouse and the studio house. Separating program elements into two buildings promotes outdoor activity across the 40-acre site. The house serves as a retreat for a couple, who go there to fish and spend time with their extended family. Reflecting the surrounding rolling hills, the buildings are composed of simple forms and straightforward materials. The house has, as one juror noted, "a real presence that is integrated, but not overpowering."



Project: *Lake Austin Residence*
Location: *Austin, Tex.*
Architect: *Lake/Flato Architects*

Similar to a fishing camp, this residence includes various buildings—a main house, guesthouse, boathouse, and home office. A boardwalk lines a canal, serving as the project's organizing spine, with the buildings unfolding along it. By stringing the 6,000-square-foot home along a narrow site, the architects wove water and land into the fabric of the house, at times creating water courts within the buildings. Breaking the whole into parts brings the scale down and allows the house to embrace the land. The interiors are light and spacious and use the same material palette as the exteriors.





The AIA Housing Committee Knowledge Community established this awards program in the year 2000 to recognize quality residential design. The program affirms that housing is not only a necessity of life, but an inspiration for owners and a valuable part of the built environment. The quality of the current winning projects corroborates this view. Categories include single-family custom, single-family market, multifamily, innovation in housing design, and community design. Also, in association with HUD, the committee created the HUD awards program to recognize excellence in housing and community design. Both programs provide important benchmarks of good design for the housing industry.

SINGLE-FAMILY MARKET

oject: *Urban Infill 01*
cation: *Milwaukee*
chitect: *Johnsen Schmaling chitects*

exibility is the key to this fordable home located in wntown Milwaukee. tended as a prototype for ban renewal, the design n be adapted as either a ngle-family home or two-mily duplex, with a plan that n accommodate multiple t sizes. Three interlocking mponents distinguish the use—a cedar-clad box for try and vertical circulation, stucco box for the main liv-



ing space, and a concrete veneer wall that transforms into a freestanding garden wall. A large second-floor window with an overhead garden trellis offers framed views of the neighborhood.







Project: *Greenwood Avenue Cottages*
Location: *Shoreline, Wash.*
Architect: *Ross Chapin Architects*

An architect/developer team finds a comfortable balance between privacy and close-knit camaraderie in this project. A unique zoning code enabled the team to double the number of houses established for the area, yet each of the quaint houses is detached from its neighbor, ensuring a sense of autonomy. A common lawn and garden, along with welcoming front porches, promote a strong feeling of community.

Residential News

MULTIFAMILY HOUSING

Project: *Soma Studios and 8th + Howard Apartments*
Location: *San Francisco*
Architect: *David Baker + Partners, Architects; IA Gonzales Architects (associate architect)*
Client: *Citizens Housing Corporation*



This boldly colored, five-story building adds vitality to a San Francisco neighborhood while maintaining its diverse population by providing 74 apartments and 88 studios, all of which are affordable. Community rooms, double-height lobbies, covered parking, and open courtyards please the residents, while a child-care center and retail space at the street level engage the larger community. "Takes an entire block in a blighted area of San Francisco and transforms it," said one juror.



COMMUNITY DESIGN

Project: *LeMoyne Revitalization*
Location: *Memphis*
Architect: *Torti Gallas and Partners*
Client: *Memphis Housing Authority*

Input from local residents and city representatives guided the design of this new community. Blending with and enhancing the existing neighborhood, this project provides twice the density of a typical single-family neighborhood of the area. All the houses were built for $55 per square foot and can accommodate individuals, families of varied financial means, or senior citizens.





Project: *The Garlands of Barrington*
Location: *Barrington, Ill.*
Architect: *Torti Gallas and Partners*
Client: *Barrington Venture*

"Every jury member would love to retire here," said one juror of this senior residence near Chicago. The complex resembles a small village or academic campus rather than a retirement community. Though all the amenities one could ask for are available on the premises, the complex is not isolated and welcomes the community. A range of housing types allows for residents with varied needs.

INNOVATION



Project: *F10 House*
Location: *Chicago*
Architect: *EHDD Architecture*
Client: *City of Chicago Department of Environment; City of Chicago Department of Housing*

This affordable house disproves the myth that green design must be expensive. Built for the Chicago Department of Housing, F10 House both fits comfortably in its urban context and incorporates sustainable elements throughout. A central solar chimney, for instance, fills the house with light and air, and durable materials and a green roof promote efficiency and low maintenance costs. A juror called it "sustainable in every way."



HUD AWARDS: COMMUNITY BY DESIGN

Project: *Linden Court and Chestnut Court*
Location: *West Oakland, Calif.*
Architect: *David Baker + Partners, Architects; Michael Willis Architects*

Just half a block from one another, these two projects offer a unique solution to neighborhood revitalization. Each project, designed by a different architectural team, has its own layout and style, but together their sensitive massing, active street fronts, varied roof heights, and interior courtyards bring security and a sense of pride to residents.



HUD AWARDS: MIXED-USE/MIXED-INCOME



Project: *Main Street North*
Location: *Boulder, Colo.*
Architect: *Wolff Lyon Architects*
Client: *Main Street North*

At the entrance to a new mixed-density neighborhood, this mixed-use hub incorporates retail, office, and affordable housing residential units. With wide sidewalks, a bustling bakery and restaurant, parking, and attractive outdoor areas, the project successfully promotes and establishes a community where there was none.

MEET EXPECTATIONS WITHOUT COMPROMISE.

green smart™

You can rely on Sherwin-Williams to help you meet your green coating specifications and satisfy all your quality expectations. And to help you identify our environmentally preferable coatings that provide maximum performance, we've developed the GreenSmart symbol. Products carrying this mark meet our highest standards for air quality, VOC emissions, life cycle cost efficiency, durability, color, and coverage. So with GreenSmart, you'll never have to compromise to meet all your requirements.

COVER THE EARTH
SHERWIN WILLIAMS.

See your Sherwin-Williams Architectural Account Executive or call our Architect & Designer Answerline at 1-800-321-8194.



www.sherwin-williams.com
©2005 The Sherwin-Williams Company

CIRCLE 89 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Products

Sustainable Choices

Maybe one day there won't be a need to highlight **sustainable building products** since they will be the norm, not the exception. Many of the products featured this month have been recycled from materials that would have ended up as waste, while others **prevent waste** in the first place. *Rita Catinella Orrell*





Eco-Terr has a recycled content of 80 percent and can be specified for countertops (above), backsplashes (right), or flooring.

Recycled granite, marble, and glass blended into a LEED-friendly kitchen countertop

For his 4,000-square-foot Fischer Island home, accessible by ferry off the coast of Miami Beach, Ron Burton wanted to use eco-friendly finishes either made with recycled content or emitting low or no VOCs. At the same time, Burton required an enduring material that would have a contemporary, Minimal look.

To match his home's white, black, and silver color palette, Burton selected a Black Diamond–colored Eco-Terr countertop and backsplash from Coverings Etc. Made from recycled granite, marble, and tempered-glass chips, and held together with a cement binder, the finish boasts a recycled content of 80 percent. The product's high recycled content helps commercial and residential projects attain LEED points, since it falls under Credit 4.1 and 4.2 Recycled Content.

Eco-Terr is available in a choice of 24 colors, but can be custom colored for larger projects. Tile sizes are 16" x 16" x ⅝" and 24" x 24" x ¾", and slabs measure 100" x 57", in ¾" and 1¼" widths.

In addition to countertops and backsplashes, Eco-Terr can be specified as a sustainable flooring material. Coverings Etc., Miami. www.coveringsetc.com **CIRCLE 211**

The next generation in wastewater treatment

Introduced by Dharma Living Systems (DLS) at last year's USGBC national conference in Portland, Oregon, a new generation of Living Machine wastewater-treatment systems can provide higher levels of water quality, use less energy, and are cost competitive with other wastewater-treatment options. Dharma Living Systems comprises a group of engineers, architects, and ecologists that provide integration services for natural living systems for projects that need water conservation methods to reduce their impact on natural resources.

The newer machines require no environmental enclosure, even in temperate climates, and can be integrated into the green spaces of a variety of project scales. The new systems do not use some of the earlier conventional processes like clarifiers or forced-air components, do not produce waste bio-solids, and can withstand large variations of loadings associated with seasonal uses. Living Machines, Taos, N.M. www.livingmachines.com **CIRCLE 212**



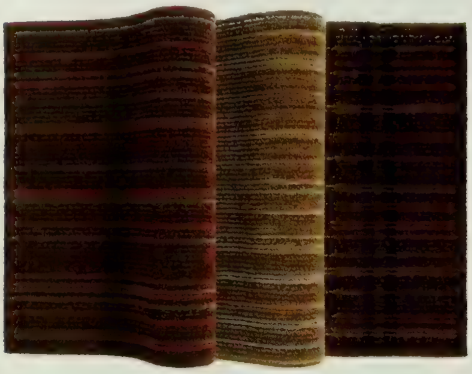
The systems integrate into the project's green spaces.



The panels will no longer use formaldehyde.

Plywood plants switch to soy-based adhesive

Columbia Forest Products announced it has begun to convert its veneer-core hardwood plywood plants to formaldehyde-free manufacturing processes using a patented, soy-based adhesive cooperatively developed by Columbia, the College of Forestry at Oregon State University, and Hercules. Hercules has awarded Columbia a license to utilize its adhesive system on an exclusive basis for all of Columbia's North American decorative-panel markets. The new adhesive, made primarily of soy flour, will allow Columbia to completely eliminate formaldehyde from its veneer-core and Woodstalk agrifiber-core panel products. The company expects the conversion to be complete within a year. Currently, there are few no-added-formaldehyde alternatives to UF-based adhesives on the market, and all are significantly higher in cost. Columbia Forest Products, Portland. www.columbiaforestproducts.com **CIRCLE 213**



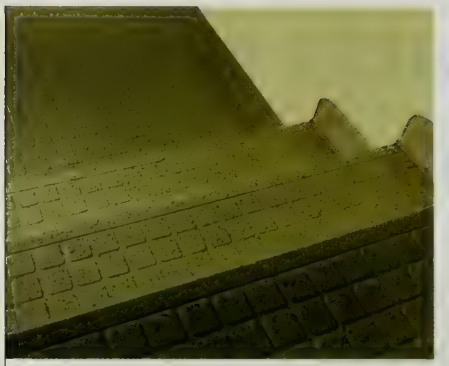
▲ Waste not, want not
Bentley Prince Street has developed a new manufacturing process that repurposes industrial waste to create broadloom and carpet-tile products. Scan and UPC, the company's two new product lines, are the fruit of the process. They utilize postproduction yarn, or "tail outs," the small cone of yarn that is left over at the end of a production run. Scan is a pin-striped broadloom, while UPC is a whimsical complement available in 18" x 18" carpet tile. Bentley Prince Street, City of Industry, Calif. www.bentleyprincestreet.com **CIRCLE 214**

► Ambient power
Solis, the newest addition to Sloan's Water Conservation Division, is an electronic, solar-powered faucet that operates via ambient lighting. Solis features an integrated-power-plant storage cell that transforms light from any source into electrical energy. Batteries provide back-up energy and can last up to 10 years. The single-hole faucet comes standard with integral temperature control, a ½-gallon-per-minute aerator to regulate water flow, and an electronic sensor for "hands-free" operation that turns water on and off automatically. The faucet comes in a durable chrome finish, and optional trim plates are available. Sloan Valve, Franklin Park, Ill. www.sloanvalve.com **CIRCLE 216**



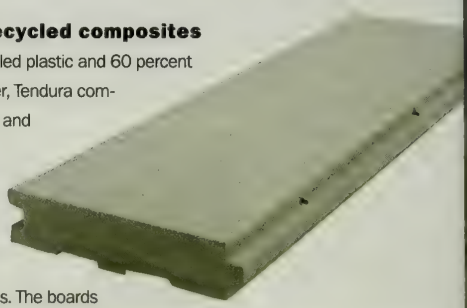


◄ Reduce noise and waste
EverQuiet sound barrier wallboards from New Frontier Industries (NFI) typically reduce noise pollution by 50 percent. Manufactured from 95 percent postconsumer recycled plastic, the panels use a proprietary process that recycles a range of plastics beyond milk and soda bottles. The walls can be engineered up to 30' high and are capable of withstanding 150-mph winds. New Frontier Industries, Milton, N.H. www.newfrontierindustries.com **CIRCLE 218**

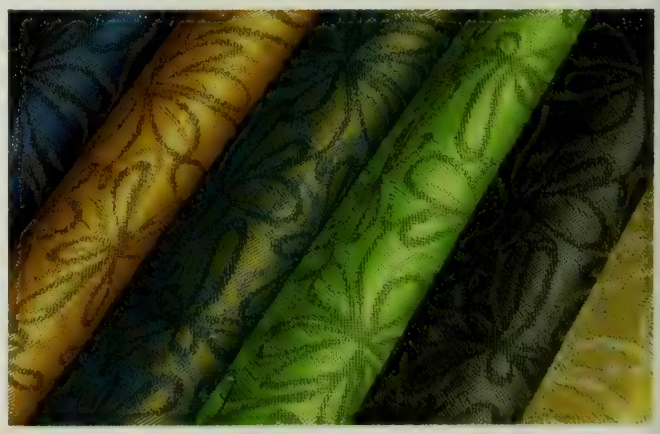


▲ New green brand
Roppe recently introduced EcoEffect, a new brand for its environmentally friendly products, including tiles, treads, wall base, and adhesives. The brand will define products made with renewable resources or postindustrial/postconsumer waste, including Fiesta tile and tread (left). Fiesta is PVC-free, contains 10 percent postindustrial waste, and features a flecked design made from recycled rubber products. Roppe adhesives feature microbial growth inhibitors and emit low VOCs. Roppe, Fostoria, Ohio. www.roppe.com **CIRCLE 215**

► Solid-colored recycled composites



Made of 40 percent recycled plastic and 60 percent industrial-waste wood fiber, Tendura composite boards are fungus- and termite-resistant. The TenduraPlank line features a tongue-and-groove floorboard designed specifically for covered-porch applications. The boards are available in a new Solid collection, which does not need to be painted. Battleship Gray (shown) is the first color available in the line, and more colors will be added soon. Tendura also offers a Classic primed model that allows homeowners to paint their porch any color they choose. Tendura, Troy, Alabama. www.tendura.com **CIRCLE 217**



▲ Intelligently green seating fabric
Mardi Gras, the latest Eco Intelligent Polyester seating fabric, is an environmentally safe product jointly developed by Canadian contract textile manufacturer Victor Innovatex and McDonough Braungart Design Chemistry (MBDC) using a new antimony-free catalyst. Mardi Gras meets MBDC's Level 4 protocol for eco-effectiveness, and is designed for optimal value recovery with closed-loop systems. The seating fabric, which features a flower motif, is available in 12 colors exclusively by Teknion. Victor Innovatex, Quebec. www.victor-innovatex.com **CIRCLE 219**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

© 2005 Pella Corporation



PELLA'S ARCHITECT SERIES® DOUBLE HUNG.
BUILT FOR THE FUTURE, WHILE REMEMBERING THE PAST.

- CREATE THE LOOK OF YESTERDAY WITH PELLA'S ARCHITECT SERIES DOUBLE HUNG—BEAUTIFULLY DETAILED SPOON HARDWARE, WIDE BOTTOM RAIL, NARROW CHECK RAIL AND A WOOD JAMBLINER.
- MEETS TODAY'S STRINGENT PERFORMANCE REQUIREMENTS—DP50 IS ASSURED IN ALL CLAD STANDARD SIZES, AND MEETS ENERGY STAR® REQUIREMENTS FOR ALL AREAS OF THE COUNTRY.
- **TO REQUEST AN APPOINTMENT FOR A PRODUCT PRESENTATION, VISIT US AT PELLA.COM OR CALL 1-800-84-PELLA.**

Pella

VIEWED TO BE THE BEST.®

CIRCLE 90 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

YOUR SINGLE SOURCE

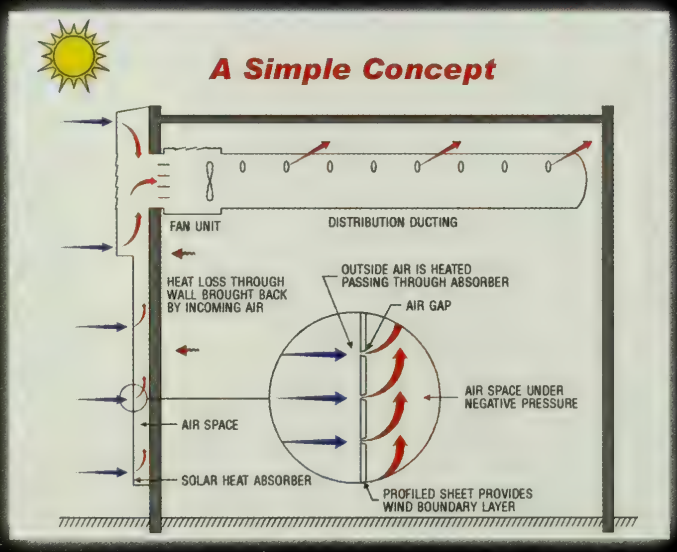
for quality products & service since 1963

ATAS

InSpire™

Solar Collector

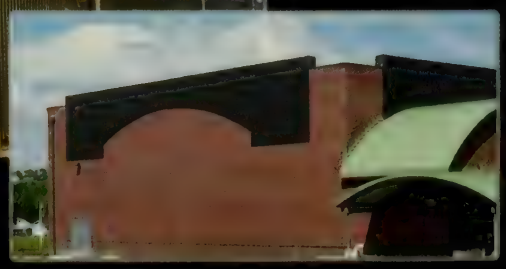
CLADDING THAT HEATS FRESH AIR



- Improve Indoor Air Quality
- Eliminate Air Stratification
- Reduce loads on your HVAC Syst
- Building Integrated Design Facili
- Maintenance Free
- Solar Heating is FREE
- Get Energy Incentives
- Get Government Incentives
- Potential LEED™ Credits
- Design Flexibility
- Favorable Payback Periods

- Walls
- Mansards
- Sloped Walls
- Accent Walls
- New Construction
- Canopies
- and more





For design options and assistance please contact ATAS International, In



ATAS International, Inc.

1-800-468-1441 www.atas.com

CIRCLE 91 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/









Playful and perforated forms thrive at the Milan Furniture Fair

Pierced, punched, die-cut, lacerated: Many products unveiled at last April's Milan Furniture Fair displayed a penchant for perforation. Louise Campbell's Prince chair for Hay, for example, featured cutouts that evoked a child's paper snowflake made in crafts class, but its black rubber surface put a sinister spin on the whimsy (page 250). Ron Arad's Ripple chair for Moroso (this page, bottom right) offered a curvaceous bucket seat with side openings that created a sculptural profile. Also for Moroso, Konstantin Grcic's Osorom ottoman plied white molded plastic into a latticelike surface (page 246).

Vibrant colors and adventurous shapes again stood out from the standard Minimalist fare. The Campana brothers created chair backs inspired by brooms for Edra, offered in rainbow shades (page 246). The prolific Patricia Urquiola, with no less than a dozen products and installations on display for various manufacturers, favored tracery etched into vibrant-hued Plexiglas for Kartell's tables (page 246).

Architects also climbed aboard the furniture-design bandwagon. The new British company Established & Sons unveiled its line, including a swooping table by Zaha Hadid (page 246). Ben van Berkel made the rounds with a circular seating unit at Walter Knoll (page 248). On the following pages, see more of the highlights from Milan. And for expanded coverage of the fair, go to Products at www.archrecord.com.

William Weathersby, Jr.

Arresting designs were everywhere at the Fair (clockwise from top left): Ezri Tarazi's New Baghdad table was part of a showcase of furniture from Israel; Philippe Starck created gilt gun lamps for Flos; Ron Arad's chairs floated at Moroso; a Mini Cooper was clad in a Bisazza-tile tartan.

▼ ► Clean sweep

The Jenette side chair for Edra features a broomlike back composed of thin PVC rods attached to a polyurethane-coated steel base (below). Designed by Fernando and Humberto Campana, the armless chairs come in six bold colors. The Mummy chair (right), designed by Peter Traag, wraps a traditional beech-framed chair with strips of leather and elastic, evoking a mummy or perhaps a small-scale project by the artist Christo. Moss, New York City. www.murraymoss.com **CIRCLE 220**

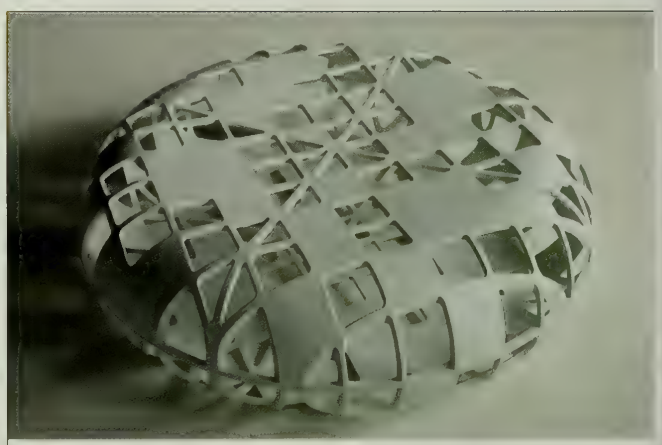




▼ Zaha Hadid catches a wave

The new British manufacturer Established & Sons unveiled its premiere line of furniture in Milan. Among the designers of the inaugural collection of tables, chairs, sofas, and accessories were architects Zaha Hadid and Future Systems, along with U.K. design stars Michael Marriott, Ed Barber, and Jay Osgerby. Hadid's Aqua dining/conference table has a wavelike form that blurs the line between horizontal and vertical surfaces. A structural polyester base supports a translucent top constructed of silicon gel. The tabletop's color gradations reveal three markings on the surface's underside. Established & Sons, London. www.establishedandsons.com **CIRCLE 221**



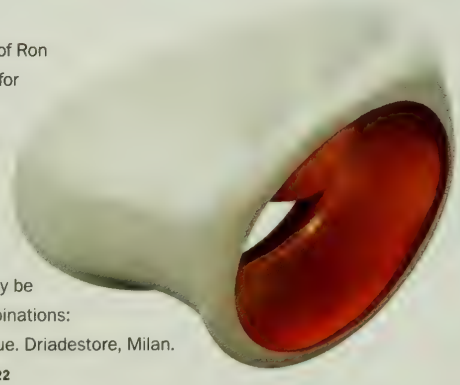


▲ Space-age ottoman

Konstantin Grcic reinterprets the ottoman as a futuristic, latticelike orb with the Osorom seating unit for Moroso. The designer says he wanted "to create an environmental sculpture that boasts airiness." The frame is a combination of fiberglass and resin, conveying transparency in a seemingly random pattern. The seat shell is a multilayered, technopolymer composite. Also from Moroso, Ron Arad's Ripple chair (page 245, bottom right) is made of white polished, injection-molded thermoplastic. Moroso, Cavalicco, Italy. www.eventi.moroso.it **CIRCLE 223**

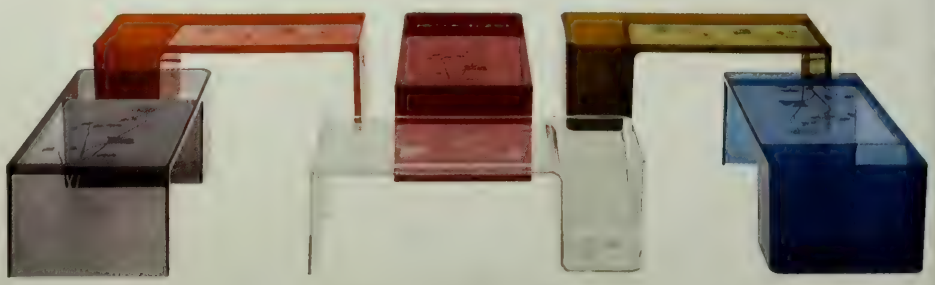
► Ron Arad rocks

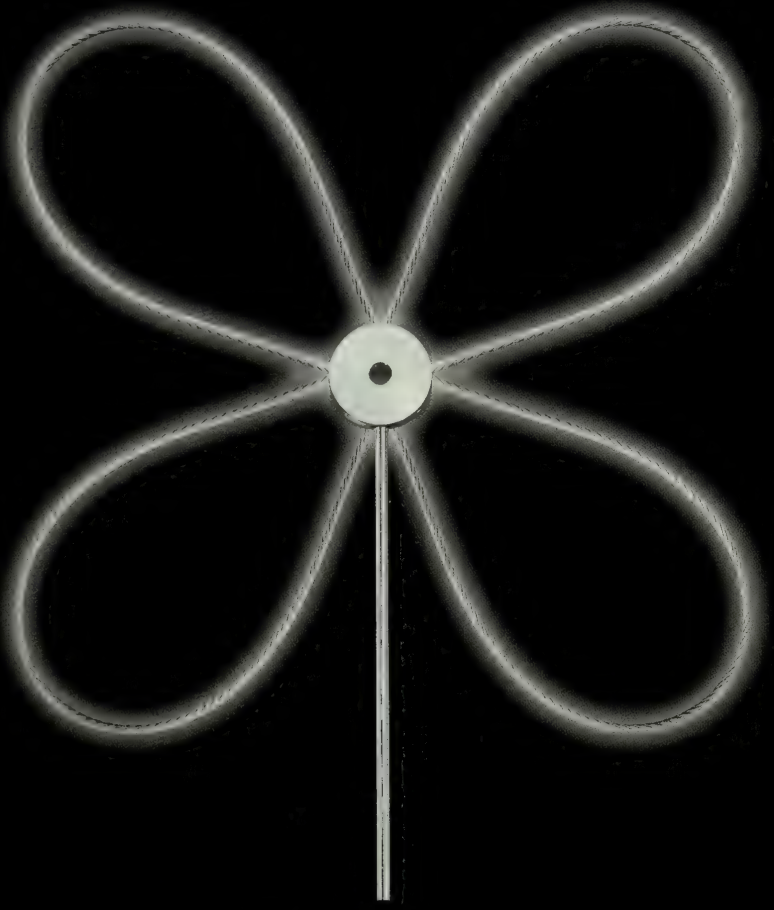
This rocking chair is part of Ron Arad's new MT 1-2-3 line for Driadestore, which also includes an armchair and divan. Meant for indoor or outdoor use, the shapely furniture is constructed of rotomolded plastic. The line will initially be offered in two color combinations: cream/orange and red/blue. Driadestore, Milan. www.driade.com **CIRCLE 222**



► Tracery tables

Spanish-born Milanese designer Patricia Urquiola combines the functions of a magazine holder and table in the Usame line for Kartell. Made of molded polycarbonate and available in a range of transparent colors, the piece can function as a side or coffee table, nightstand, or bed tray. Etched with abstract floral tracery, the table measures 33½" x 16", with a height of 12". Kartell US, New York City. www.kartell-us.com **CIRCLE 224**





Green

Carl Stahl®
DÉCORCABLE
The Best InTension™

i-SYS ®
Stainless Steel
Cable and Rods

X-TEND ®
Flexible
Stainless
Mesh

MCS ®
Cable
and Rod
System

POSILOCK ®
Suspension
Displays

Streamline ™
Design
Accessories

FacadeScape™
Stainless Trellis
Systems

Web: www.decorcable.com E-mail: sales@decorcable.com Phone: 1.800.444.6271

CIRCLE 92 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs Milan Furniture Fair

▼ Winner's circle

Architect Ben van Berkel of Amsterdam's UN Studio demonstrates his deftness at furniture design with the launch of Circle seating for Walter Knoll. The seating unit is composed of four parts, two that combine to create a semicircle or all four forming a round seating "sculpture." The slope of both the back and the seating plane create an unbroken flow of user movement, from sitting upright to reclining. Flexible configurations "allow a dialogue between concave and convex formations," says Van Berkel. The seating will be initially offered in two color combinations: green/yellow and slate/red. Walter Knoll, Herrenberg, Germany. www.walterknoll.de **CIRCLE 225**





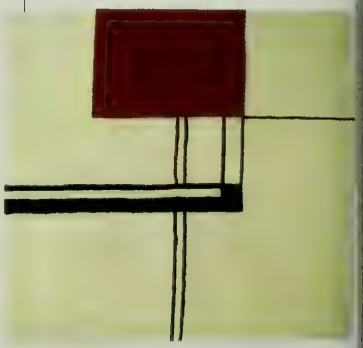


▲ World Wanders

New Antiques is a series of imaginative tables designed by the prolific Dutch designer Marcel Wanders. The occasional or tea table (above) is accompanied by a full-length dining table. The black-painted wood tables feature three-dimensional plastic ornamentation that seems to mildly mock the flourishes of classical furniture designs. The smaller table features a fumé glass top. Cappellini, Milan. www.cappellini.com **CIRCLE 226**

▼ Shades of Gray

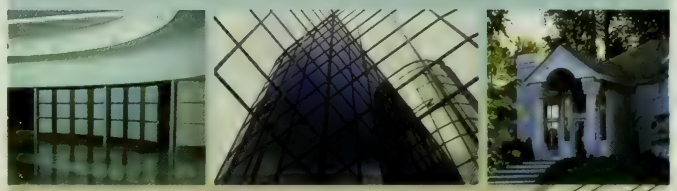
Furniture and rugs designed by Eileen Gray in the 1920s and '30s never seem to go out of style. Before she practiced architecture, Gray ran her own design and production studio. Some of her striking rug patterns are now available again as reeditions: abstract textile pieces of 100 percent wool, handwoven with a density of 80 knots per square inch. The Wendingen rug (below) was Gray's tribute to the famed Dutch architectural journal that raised her profile. ClassiCon, Munich. www.classicon.com **CIRCLE 227**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

PEMKO CARES!

Pemko Manufacturing Co. cares about the environment and the impact that our products have on it. We provide energy saving products that reduce utility costs for a cleaner environment!

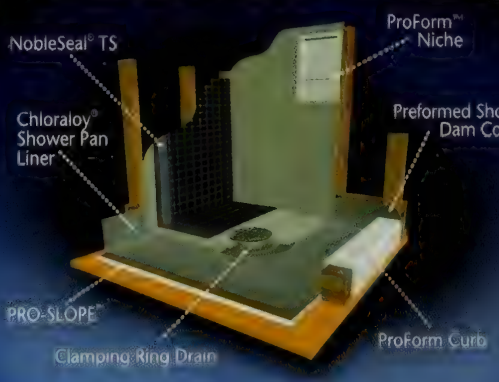


PROTECT AGAINST THE ELEMENTS!
REDUCE UTILITY COSTS!
ENVIRONMENTALLY RESPONSIBLE!
CONTROL VENTILATION!
LIFE SAFETY PRODUCTS!

PEMKO
www.pemko.com 1.800.283.9988

CIRCLE 93 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

create a watertight shower
in less time with products from Noble Company



ProForm Niches and Curbs
Waterproof, lightweight and tile ready.
PRO-SLOPE
Creates the slope required under the shower pan.
Chloraloy
Shower pan liner made from CPE. Guaranteed to last.
Clamping Ring Drain
Available with either a square or round strainer.
NobleSeal TS
Thin-set waterproofing for shower walls, drying areas, floors, etc.

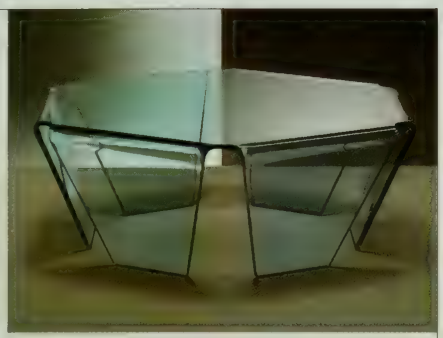
Noble Company
800-878-5788
www.noblecompany.com

CIRCLE 94 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



◄ Pivot at work

Designer Antonio Citterio continues his longstanding collaboration with B&B Italia with the introduction of the Arne furniture line. A bookcase takes the form of a curved wood container with a lacquered interior finish; a steel pin enables the unit to pivot away from a desk that rests on chrome-plated steel rods. The line also includes a sofa and a low table made of curved wood with light oak, gray, brown, and cognac finishes. B&B Italia, Milan. www.bebitalia.it **CIRCLE 228**



► A delicate balance

The Jonker coffee table created by Christopher Combes and Cristiana Giopato balances its glass tabletop on six angled glass supports. The table measures 12⅜" high x 35⅛" wide x 35⅛" deep. Fiamitalia also displayed the Slash coffee table designed by Rodolfo Dordoni, which features a diagonal bridge of smoked glass independent of a lacquered wooden base that comes in black or white. Fiamitalia, Tavullia, Italy. www.fiamitalia.it **CIRCLE 229**

► Full circle

The Giro chair by Gala Wright for Coro is composed of a satin-finish steel frame supporting an elastic mesh seat. The seat, which can be specified in a range of colors, can swing and rotate within the circular support. When not in use, the seat can be tilted up to lie flat vertically within the frame. For the fair, the company also presented its Fellini line of upholstered seating pieces, including sofas, chaise longues, and side and lounge chairs. An accessories line has expanded the collection of cutlery and dinnerware. Coro, Monza, Italy. www.coroitalia.com **CIRCLE 230**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Discover the lasting beauty of genuine teak



- Lumber
- Millwork
- Flooring
- Plywood
- Doors
- Teak & Ipe
- Decking

No one knows more about Teak or takes more care in bringing it to you.

www.eastteak.com

EAST TEAK

TRADING GROUP, INCORPORATED

(800)338-5636 East Coast (800)537-3369 West Coast

CIRCLE 95 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

If green building is your business,

using wood from sustainably managed forests should be your goal.

The Sustainable Forestry Initiative® program has committed to the future of the nation's forests by combining the perpetual growing and harvesting of trees with the long-term protection of wildlife, plants, soil and water quality. SFI® program participants plant 1.7 million trees every day.

SUSTAINABLE FORESTRY INITIATIVE

Growing Tomorrow's Forests Today®

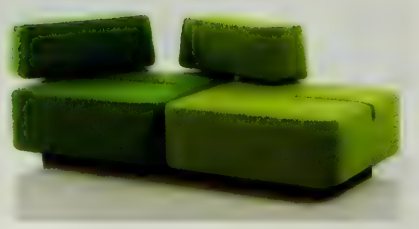
www.aboutsfi.org

CIRCLE 96 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

▼ Light fantastic

William Brand and Annet van Egmond are two artists who design and manufacture handcrafted lighting and furniture. Trained as a sculptor and an architect, respectively, the partners create fanciful forms from forged metals and handblown glass. Dramatic, one-of a-kind chandeliers, like the one shown below, are complemented by chairs and settees whose backs sometimes feature the same manipulated metalwork. Other pendants in the line incorporate Swarovski crystals, nickel finishes, and multiple lamp sources. Brand van Egmond, Naarden, the Netherlands. www.brand-egmond.com **CIRCLE 231**





▲ Lean and green

Valvomo Architects is a design and architecture studio based in Helsinki, Finland, founded in 1993 by eight partners. Part of its latest furniture line, the Movie easy chair/sofa system (left) has units that can be attached to each other freely (corner parts are not needed). Pairing identical units, it is easy to change the function and proportions of the sofa. A backrest is attached to the seat with one axle that can be rotated. Valvomo, Helsinki. www.valvomo.com **CIRCLE 232**

► Prince's lace

Louise Campbell's Prince chair manufactured by the Danish company Hay cuts a dramatic profile, with a perforated black-rubber surface overlaying a metal foundation. The abstracted floral pattern and the unusual finish add a layer of mystery to this modern lounge chair. In Milan, Hay also showcased new sofas, tables, and lounge and side chairs designed by Leif Jorgensen and Jakob Wagner. Hay, Copenhagen. www.hay.dk **CIRCLE 233**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Innovative Monitor Support

Flat Screen Arms give desk space back to you! We offer models holding one, two, four, as many as eight screens.

FSA1

Adjustable up, down, or sideways for optimum flexibility. Die cast aluminum finished in Matte Satin and Matte Black. Drill one 9/16" hole to mount.



"FINE ARCHITECTURAL HARDWARE FOR YOUR FINE FURNITURE"®

Doug Mockett & Company, Inc. • Manhattan Beach, CA • 800.523.1269

MOCKETT

DOUG MOCKETT & COMPANY, INC.

www.mockett.com

CIRCLE 97 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Culinary Brilliance on the HORIZON...



KENYON®

Custom

Manufacturer of the World's Finest Cook Tops

Visit us at HD EXPO Booth #1874 and K/BIS Booth #4257

Clinton, CT (860) 664-4906 fax: (860) 664-4907 www.kenyonappliances.com

CIRCLE 98 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Mortar Net®
USA LTD.

with mortar net there is NO "or equal"



McCormick Place West
Chicago, IL



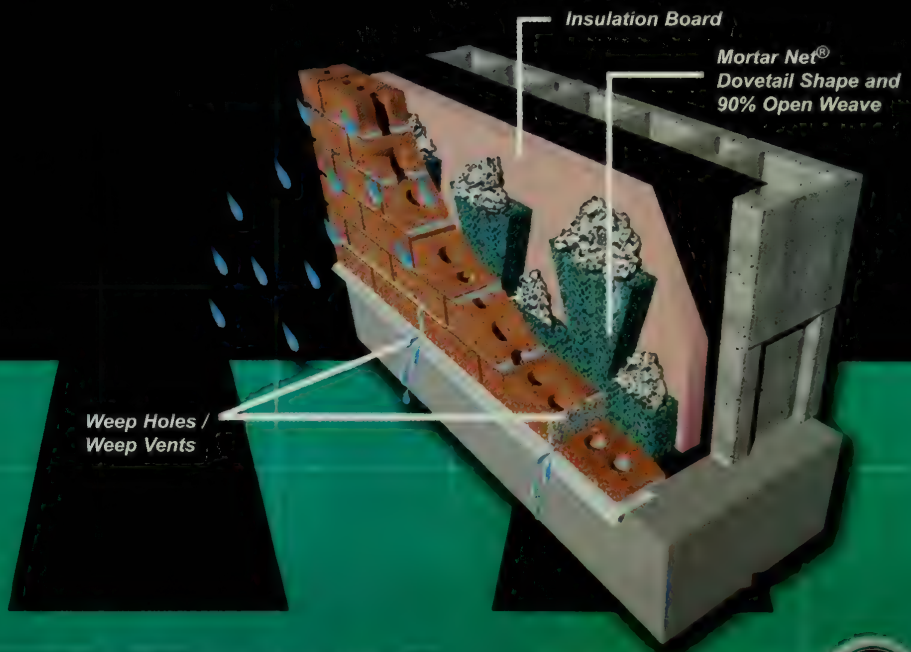
Sprint Headquarters
Overland Park, KS



Bricktown Ballpark
Oklahoma City, OK

At Mortar Net USA, we invent solutions. We've won multiple U.S. patents for our low-cost systems that effectively prevent moisture-buildup in open-cavity masonry walls. These simple to install systems feature a tough, 90% open-weave polyester mesh, with anti-microbial qualities, that lets interior moisture drain to the outdoors, unimpeded by mortar-droppings or debris. By eliminating moisture-buildup, we also eliminated efflorescence and freeze/thaw damage. But best of all, our systems help to deliver in the industry's long-fought battle against mold. With many insurance companies no longer covering mold claims, today's builders insist on our patented moisture-dispersal systems. They've discovered there's absolutely no "or equal" for Mortar Net, BlockNet, or Blok-Flash.*

*Source: United States Patent and Trademark Office



800-664-6638
www.MortarNet.com/ar

- Mortar Net®
- Weep Vents™
- BlockNet®
- Blok-Flash®

ARCAT

CIRCLE 99 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS

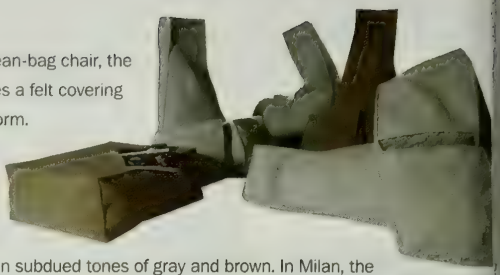
Product Briefs Milan Furniture Fair



▲ The Bouroullec brothers are back

Designers Ronan and Erwan Bouroullec created a spectacular temporary space for Vitra during the fair, converting a former sports arena into a lively landscape showcasing furniture by Jasper Morrison, Philippe Starck, and Herzog & de Meuron, among others. The brothers' Late sofa for Vitra and Lantern for Belux (above) offered new twists on traditional designs. The light fixture consists of two identically shaped plastic bowls joined with a horizontal black plastic ring. The sofa comes with an attached side table. Belux, Birsfelden, Switzerland. www.belux.com **CIRCLE 234** Vitra, Wien, Austria. www.vitra.com **CIRCLE 235**

► Sack out



A modern take on the bean-bag chair, the Dickies "sit sack" features a felt covering over a fiber-filled inner form. Designed by Anthony Kleinepier for Moooi Design, the irregularly shaped pieces come as a chair or ottoman, and in subdued tones of gray and brown. In Milan, the company also unveiled the Naked chair designed by Marcel Wanders, which adapts a custom chair he originally designed for the charity restaurant Fifteen, run by TV's "Naked Chef" Jamie Oliver. Wanders's Two-Tops secretary hides a laptop in a cove beneath a flip-up desktop. Moooi Design, Amsterdam. www.moooi.nl **CIRCLE 236**



◄ A fine romance

Romeo and Giulietta are a sculptural table and chair paired to complement each other. Designed by Franco Poli, the Romeo table has a square or rectangular top of Macassar ebony, resting on a silver- or gold-plated base. The Giulietta chair comes upholstered in fabric, leather, or a polymer synthetic, and can be specified in a solid or two-tone finish. Bernini, Milan. www.bernini.it **CIRCLE 237**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

TURNING GREY CONCRETE GREEN

These microscopic, glassy spheres are fly ash – and at Headwaters Resources, Inc. we sell millions of tons of them every year.

Produced by burning coal at electric power plants, fly ash might be destined for disposal in a landfill. But when added to concrete, fly ash makes concrete easier to work with, stronger and more durable.

Fly ash also improves the environmental performance of concrete. Mining and manufacturing of other raw materials can be reduced. Greenhouse gas emissions also decrease. In fact, using a ton of fly ash can save almost a ton of CO_2 emissions from being introduced into the atmosphere. In addition to concrete, fly ash is used in mortars, stuccos and a variety of other building materials.

That's an improvement worth specifying.

HEADWATERS RESOURCES
Formerly ISG Resources, Inc.

Contact Headwaters Resources for free technical literature and information on how fly ash use benefits the environment.

1.888.236.6236
www.flyash.com

Promote Your Products

Order *Architectural Record* Reprints and Photocopy Permissions



REPRINTS
Custom Reprints: Minimum order 1,000
Contact: Michael Shober
Phone: 800-360-5549 ext.129
Email: architecturalrecord@reprintbuyer.com

BLACK & WHITE PHOTOCOPIES*
Contact: Copyright Clearance Center
Phone: 978-750-8400
Fax: 978-750-4470
Web address: www.copyright.com

* Please note that the maximum number of copies granted for commercial use is 500. Schools may obtain permission to make up to 1,000 copies for classroom use.

connecting people_projects_products

McGraw-Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications
Find us online at www.construction.com
The McGraw-Hill Companies

CIRCLE 100 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Pick a casing. Any casing.



Choosing The Right Casing Is A Snap With Timely® Prefinished Steel Door Frames.

Timely offers a selection of five versatile casing profiles to meet your design requirements. These prefinished casings utilize the frame's "snap-lock" sustained tension clips that secure the casings and hold them flush against the wall, eliminating gaps caused by uneven surfaces. Tight miters are also assured. And Timely's unique full perimeter anchoring system provides much greater strength than hollow metal. Timely casings add the crowning touch to commercial, industrial and residential applications. All casing designs are available in an unlimited selection of stocking and custom colors as well as prime. We also match any color requested. For wood casings with the Timely steel frame, supply your own choice of wood trim. The Timely system does not require special millwork.



You make the right choice when you specify Timely.

TA-8 Standard Steel Casing
TA-30 Colonial Steel Casing
TA-35 PVC Colonial Casing
TA-23 Aluminum Casing
TA-28 Aluminum Casing

TIMELY
PREFINISHED STEEL DOOR FRAMES
A DIVISION OF S.D.S. INDUSTRIES, INC.

Meeting Your Demand for Quality: Over 30 trendsetting years in the field. **Versatility:** Colors to complement any decor. **Strength:** Sturdy full perimeter anchoring. **Beauty:** MiterGard® for perfect corners. **Fire Rating:** Full 90 minute positive pressure.
For more details, visit us at **www.timelyframes.com** or call our **Marketing Services Department. 800-247-6242**

© Timely 2005

CIRCLE 101 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 102 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Literature

Lighting spec catalog

FC Lighting has released a fully updated specifications catalog. The comprehensive, 320-page catalog showcases FC Lighting's full product line, including 48 new additions, through a combination of full-color booklets and detailed specification sheets. The catalog is organized into four sections: Exterior, Interior, Tracks, and Recessed. FC Lighting, Addison, Ill. www.fclighting.com **CIRCLE 238**

Hurricane-resistant systems

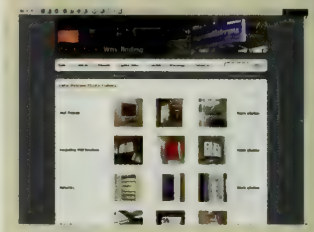
Specialty-glazing contractor Harmon offers a new product brochure highlighting its two hurricane-impact curtain-wall systems for single- and multispan commercial building applications. Harmon, Golden Valley, Minn. www.harmoninc.com **CIRCLE 239**

New surface material options

Nucraft has refreshed and updated its surface materials offerings with a number of new veneer finish choices, the addition of a matte finish as a standard choice, and the availability of metallic silver and graphite paint options on more products. A new brochure features the surface material additions. Nucraft, Grand Rapids, Mich. www.nucraft.com **CIRCLE 240**

NEW SITES FOR CYBERSURFING

Online photo gallery showcases "modular curved frame technology." **www.vistasystem.com/espotlight.html**



Door-control specifiers can access data sheets, specs, and installation instructions. **www.dorma-usa.com**

Updated online photo gallery of decorative lighting fixtures. **www.seagulllighting.com**

The latest from the infamous Dutch designer. **www.marcelwanders.com**

Tile color additions

Altro has updated the colors of its Altro Quartz tile range of high-performance commercial flooring. Now available in 25 solid colors and 10 chipped colors, Altro Quartz Tile features more than 30 percent recycled content. Altro has created a new architectural folder and sample box to showcase the new tile. Altro, Mississauga, Ontario. www.altrofloors.com **CIRCLE 241**









For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



CIRCLE 103 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Literature

Recessed-downlight brochure

Prescolite offers a new brochure detailing its complete line of Architektur decorative recessed-ceiling-downlight products and trims. The 36-page brochure covers a range of recessed-downlight fixtures and reflector, lamping, and trim options. The brochure provides general application support information, such as suggestions on how products can be used to best illuminate high-ceiling, slope-ceiling, and other challenging interiors, and accenting the architecture of a space with lighting. Prescolite, Spartenburg, S.C. www.prescolite.com **CIRCLE 242**

Decorative glass lighting

Besa Lighting is offering a 174-page catalog featuring a complete line of lighting solutions designed with decorative glass from the world-famous Herner Glass Factory in Germany. The catalog includes color photos, specs, and other information on a myriad of lighting fixtures featuring a range of luminaire styles, colors, metal finishes, and lamping options. Besa Lighting, Columbus, Ohio. www.besalighting.com **CIRCLE 243**

Exec casegoods brochure

CCN International has announced a new brochure that details the executive/management casegoods product titled Prizein. The 12-page color brochure opens with a brief description of the product's scope, followed by a series of application photographs that illustrate some of the design possibilities. CCN International, Geneva, N.Y. www.ccninternational.com **CIRCLE 244**

Wayfinding guidebook

The 82-page *Guidebook 2 Signs* from Vista System features more than 500 examples of sign types, including wayfinding signs. It is available in eight languages. Vista System, Sarasota, Fla. www.vistasystem.com **CIRCLE 245**

Faucet/shower combo

Hansgrohe has released an 84-page brochure that combines the company's two premium faucet and shower product series: Interactiv and Retroactiv. Both series are exclusive to the North American market and carry midrange price points. Hansgrohe, Alpharetta, Ga. www.hansgrohe-usa.com **CIRCLE 246**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Tile and stone should last forever...

The specification process should NOT!



Complete customizable specifications and details for successful ceramic tile and stone installation systems – ***in seconds!***

Request yours at **www.laticrete.com/ag**

LATICRETE®

Globally proven. Professionally endorsed.

www.laticrete.com • support@laticrete.com

©2005 LATICRETE INTERNATIONAL, INC.
LATICRETE, LATAPOXY and the LATICRETE logo are Registered Trademarks of LATICRETE International, Inc.

A-1410-0405

CIRCLE 104 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

BELDEN

THE BELDEN BRICK COMPANY

Canton, Ohio / (330) 456-0031

www.beldenbrick.com

An ISO 9001:2000 Registered
Quality Management System





Colors

Belden Brick is available in a world of colors including soft whites and creams, golden buffs and dusty tans, delicate pinks and cinnamon reds, chocolate browns, pewter grays and coal blacks. With so many colors to choose from, your options are truly endless. Here is a small sample of over 200 color ranges, 13 textures and 16 different sizes.

Landmarks in Brick

Sizes & Shapes

More sizes mean lower wall costs. Wit as many as sixteen different sizes t choose from Belden has the size yo need. Plus, Belden has made thousand of special shapes to provide specia details for individual projects. Need a "impossible" shape for your project Then call Belden Brick and learn hov the impossible can become reality



Textures

Belden Brick offers thirteen different textures that range from silky smooth finishes to rugged randomly textured styles. Each texture can make its own distinctive contribution to the visual impact you seek.









CIRCLE 105 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

New & Upcoming Exhibitions

Designed for Living: The Modern Interior
Chicago
July 1–August 27, 2005
The concept of modernity used as a marketing device began in the early 20th century. Design drawings by G.M. Niedecken and two modern masters, Alfonso Iannelli and Henry P. Glass, are featured in this exhibition. At the Architech Gallery of Architectural Art. Call 312/475-1290 or visit www.architechgallery.com.

Going, Going, Gone? Mid-Century Modern Architecture in South Florida
Fort Lauderdale, Fla.
July 8–October 30, 2005
Can we still save South Florida's midcentury Modern architecture? This exhibition is a photographic journey through Broward and Miami-Dade counties, featuring the work of photographer Robin Hill, who has shot dozens of outstanding South Florida structures dating back to the mid-20th century. At the Museum of Art. Call 954/525-5500 or visit www.moafl.org.

Mies
Miami
July 11–September 30, 2005
A photo exhibition by photographer Paul Clemence celebrating the work of Mies van der Rohe. The photographs zero in on the architectural details of some of Mies's masterpieces, like the Farnsworth House, Crown Hall, and the German Pavilion at Barcelona. At the Florida International University School of Architecture. Call 305/348-3181 or visit www.fiu.edu.

Romantic Modernist: The Life and Work of Norman Jaffe, Architect
Southampton, N.Y.
July 24–September 18, 2005
Norman Jaffe built more than 600 projects during his 35-year career. He received numerous architecture awards and also participated in national and international exhibitions at leading institutions, including New York's Museum of Modern Art. Eastern Long Island is where Jaffe found his place in American architecture, creating unique vacation homes while exploring his love of light and form. This is the first major exhibition to examine the life and work of this important American architect. At the Parrish Art Museum. Call 631/283-2118 or visit www.parrishart.org.

Jean Prouvé: Three Nomadic Structures
West Hollywood
August 14, 2005–November 27, 2006
The first American presentation of the work of celebrated French designer and architect Jean Prouvé (1901–84), this exhibition includes furniture, vintage photography by Lucien Hervé, and architectural elements that address the most important aspects of Prouvé's practice: technological innovation, itinerant housing, the development of modular systems, and the use of aluminum. The exhibition installation, designed by Evan Douglis, is inspired by Jean Prouvé's commitment to exploring the most advanced technology of his time. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

2005 Serpentine Gallery Pavilion Program
London
Summer 2005
Portuguese Pritzker Prize–winning architect Alvaro Siza and his long-time collaborator, the distinguished architect Eduardo Souto de Mouro, will design the next Serpentine Gallery Pavilion. Since the commission was launched in 2000, it has resulted in four landmark temporary structures. At the Serpentine Gallery. Call 020/7402-6075 or visit www.serpentinegallery.org.

A Touch of Cass Ramsey Hill Historic House Tour
Saint Paul, Minn.
September 11, 2005
The 2005 tour will focus on homes designed by renowned architect Cass Gilbert, in honor of the centennial celebration of Gilbert's most famous Minnesota masterpiece—the State Capitol Building. For information, call 651/228-9111 or visit www.ramseyhill.org.

Raymond Loewy: Designs for a Consumer Culture
Atlanta
September 15–December 23, 2005
A pioneer of the industrial design profession, Loewy crafted a signature style by blending the traditional with European Modernism. The exhibition showcases the work of Loewy and his



THERMAX* is here.

Call 1-866-583-BLUE (2583) or visit www.dowstyrofoam.com/architect.

DOW
Building & Construction

*Trademark of The Dow Chemical Company

CIRCLE 106 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

get
I ~~need~~
cabinetry
specs to
create great
designs.
at
kraftmaidspec.com



Only KraftMaidspec.com lets you download AutoCAD drawings of every single cabinet and gives detailed information on door styles, finishes, storage solutions and our quality construction. Visit KraftMaidspec.com and see why so many architects rely on it as their design resource.

Made just for you.
KraftMaid
Cabinetry

www.kraftmaidspec.com

CIRCLE 107 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events



associates with an array of original drawings, models, products, advertisements, photographs, archival documents, and rare footage of Loewy at work over five decades. It brings together the career of the prolific and influential figure who did much to define the culture of consumption. At the Museum of Design Atlanta. For more information, call 404/688-2467 or visit www.museumofdesign.org.

Renewing Wright
Pittsburgh
October 1, 2005–January 15, 2006
This exhibition brings together two iconic buildings by Frank Lloyd Wright with, in each case, an associated project by a leading visionary architect of today. At the Heinz Architectural Center, Carnegie Museum of Art. Call 412/622-3131 or visit www.cmoa.org.

Ongoing Exhibitions

Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation 1968–1975
New York City
Through September 10, 2005
In response to the lack of housing units being built for families with limited income, a concerned group of architects, planners, policy makers, public advocates, and environmental psychologists will take a look at the situation by presenting an evaluation of the housing produced by the New York State Urban Development Corporation. The exhibition will use plans and photographs of a sample of projects around New York State that demonstrate housing of differing conditions: urban and suburban; mixed income; high-rise and low-rise; various densities; and various building materials and technologies. At the Center for Architecture. Visit www.udchousing.org or www.aiany.org.

The Architect Jean Nouvel Meets Louisiana
Humblebaek, Denmark
Through September 18, 2005
Jean Nouvel is one of the most famous members of the generation that has been called the New Wave of French architects, all of whom participated in "Les Grands Projets" in Paris during the Mitterrand era. Jean Nouvel's self-curated exhibition aims to demonstrate his fundamental architectural principle—the strong dialogue with the spirit and specific character of a place that forms the point of departure for every Nouvel project. At the Museum of Modern Art. Call 45/4919-0719 or visit www.louisiana.dk.

Carlos Garaicoa
Los Angeles
Through July 17, 2005
The first U.S. museum survey of recent work by Cuban artist Carlos Garaicoa, who addresses Cuba's politics and ideologies through the examination of Modern architecture. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

Trading Places
Las Vegas
Through July 18, 2005
Killefer Flammang Architects' pioneering adaptive reuse work in downtown Los Angeles is being highlighted with that of Las Vegas–based Marnell Corrao Associates—the preeminent Nevada design/build firm—in this exhibition. At the Donna Beam Fine Art Gallery at UNLV. Call 702/895-3893 or visit www.unlv.edu.

Heather Allen: Architectural Textiles
Washington, D.C.
Through July 29, 2005
This exhibition features 30 of Allen's handwoven and -painted rugs and wall textiles. The architectural imagery represents Allen's exploration of interior space and emotional color. At the Octagon, the museum of the American Architectural Foundation. For information, call 202/638-3221 or visit www.theoctagon.org.

Vanishing Point
Columbus, Ohio
Through August 14, 2005
This exhibition features photographs, paintings, drawings, video, and mixed-media installations that explore the aesthetics of contemporary urban "nonspaces." These ubiquitous public realms—convenience stores, hotel lobbies, shopping malls, airport terminals, parking lots—are often considered anonymous, banal, or otherwise socially and culturally insignificant. Rather than objectively documenting these spaces, the artists in *Vanishing Point* interpret them by focusing on their experiential and atmospheric qualities. At the Belmont Building,

Wexner Center for the Arts. Call 614/292-0330 or visit www.wexarts.org.

2005 Young Architects Program Proposals
New York City
Through August 22, 2005
An installation of the proposed designs by the five 2005 Young Architects Program finalists: the winner, Xefirotarch (Los Angeles), and finalists Aranda/Lasch (New York), Forsythe + MacAllen Design (Vancouver, B.C.), Graftworks (New York), and WW (Boston). In the Louise Reinhardt Smith Gallery at the Museum of Modern Art. Call 212/708-9400 or visit www.moma.org.



Claesson Koivisto Rune—The Models
Stockholm
Through September 4, 2005
An internationally recognized design and architecture practice, Claesson Koivisto Rune was formed in 1995. A large number of models, representing 85 different projects ranging from rough mock-ups to presentation models and finished prototypes, will be on view. At the Arkitekturmuseet. Call 46(0)8/587-27000 or visit www.arkitekturmuseet.se.

Filigree Spaces:
Textile Installations by Piper Shepard
Baltimore
Through September 18, 2005
The two new installations, featuring a dramatic curtain wall in the Baltimore Museum of Art's lobby and a "room within a room" design in the museum's textile gallery, explore the connection between textiles and architecture. At the Baltimore Museum of Art. Call 410/396-7100 or visit www.artbma.org.

a_show Stage 2: Austrian Architecture in the 20th and 21st Centuries
Vienna
Through September 2005
Due to the sheer scope of material covered by the exhibition, *a_show* is being subdivided into 10 themes to be opened successively in three stages. The first stage, covering the period 1850–1918, opened in March 2004 with much success. *Stage 2* extends to the period from 1919–58. At the Architekturzentrum Wien. Call 431/522-3115 or visit www.azw.at.

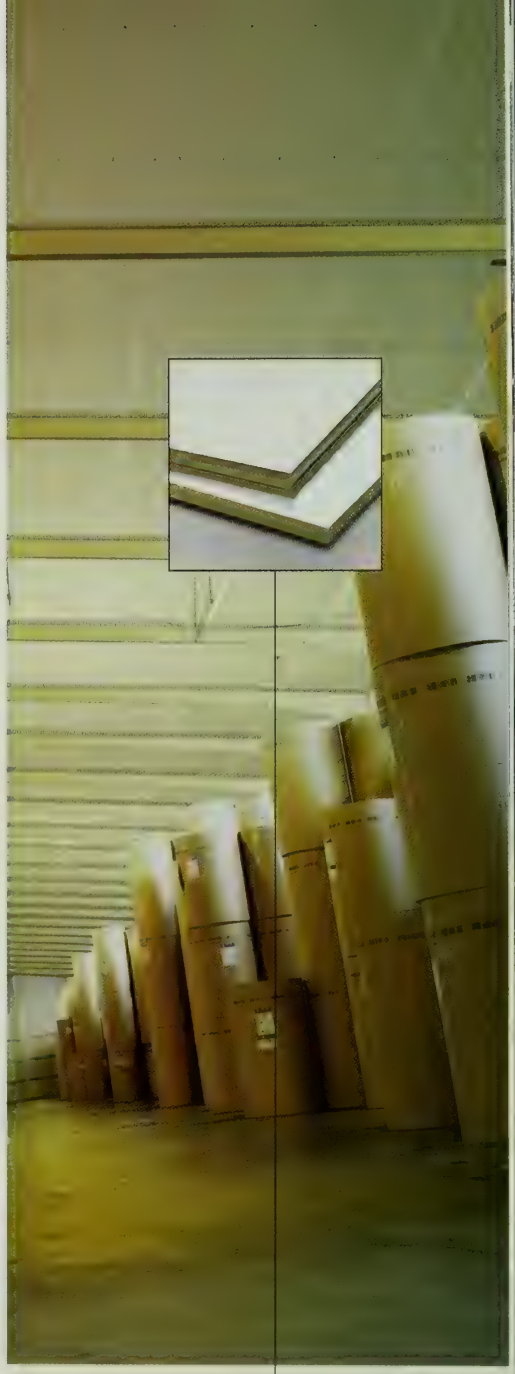
On Tour with Renzo Piano & Building Workshop: Selected Projects
Los Angeles
Through October 2, 2005
Featuring several seminal works, the exhibition shows an intimate view of one of the most respected and visionary architects of our time. Piano's involvement in each stage of a building's development—from concept and master plan to construction and detailing—is chronicled. In the Ahmanson Building at the Los Angeles County Museum of Art. Call 323/857-6000 or visit www.lacma.org.

Transformed: Uncommon Uses of Materials in Contemporary Design
Philadelphia
Through October 9, 2005
With a focus on both form and function, this exhibition comprises 19 contemporary design objects in the Philadelphia Museum of Art's collection, providing an illuminating look at what happens when today's designers fuse utilitarian objects with unconventional materials, such as silicon, recycled plastic, fibrated concrete, and even goose feathers. The exhibition includes pieces by Ingo Maurer, Frank O. Gehry, Tokujin Yoshioka, and Fernando and Humberto Campana, among others. At the Philadelphia Museum of Art. Call 215/763-8100 or visit www.philamuseum.org.

Lectures, Conferences, and Symposia

The Reel Architecture Film Series
Washington, D.C.
July 9, 10, 13–August 24, 2005
In celebration of the National Building Museum's 25th anniversary, this free series will screen American films that reflect themes found in the National Building Museum's 25 years of exhibitions, such as sustainable architecture, transportation and transit, and office design. Films will be shown in the National Building Museum's Great Hall. Call 202/272-2448 or visit www.nbm.org.

Glenn Murcutt International Architecture Master Class
Sydney
July 10–24, 2005
Since 2001, participants in the annual Master



CIRCLE 108 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Class have included architects, academics, postgraduates, and senior students from around the world. Glenn Murcutt, 2002 Pritzker Prize Laureate, leads the Master Class, a two-week residential studio program which will be held for one week at the Boyd Education Centre "Riverdale" (described as Murcutt's "master work"), on the banks of the Shoalhaven River, and for the second week at the University of Sydney School of Architecture. Visit www.ozetecture.org.

Landscape Design Intensive Program
New York City
July 11–August 12, 2005; July 25–August 26, 2005
A five-week program with landscape architecture and design professionals. At the New York Botanical Garden. Call 718/817-8845 or visit www.nybg.org.

The League of Historic American Theatres 29th Annual Conference
Kansas City, Mo.
July 20–23, 2005
The conference, *Creating a Legacy: Historic Theatres in the Middle of It All*, includes tours of historic theaters, professional development and educational sessions, peer-group discussions, the 2005 LHAT Awards Banquet, a silent auction, and the annual "Meet the LHAT Service Providers and Suppliers" reception. Visit www.lhat.org or call 410/659-9533 for more information.

Lecture: Cameron Sinclair: Design Like You Give a Damn
Washington, D.C.
July 21, 2005
Following last December's tsunami in the Pacific Ocean, the nonprofit aid organization Architecture For Humanity (AFH) raised more than $500,000 in donations and pro bono services to help rebuild critical infrastructure and community buildings in the disaster region. AFH founder Cameron Sinclair will discuss his recent travels to the devastated areas and the organization's response to global, social, and humanitarian crises through architecture and design. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lecture: Richard Neutra and His Miller Home
Washington, D.C.
July 26, 2005
In 1936, St. Louis socialite Grace Lewis Miller commissioned internationally acclaimed architect Richard Neutra to design a winter house in the burgeoning desert resort of Palm Springs, California. Stephen Leet, associate professor at Washington University, will first briefly discuss Neutra's career and then trace the Miller House from conception to realization. He will also examine the complex relationship between the architect and client as detailed in their extensive and impassioned correspondence. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lecture: Romantic Modernist: The Life and Work of Norman Jaffe, Architect
Southampton, N.Y.
July 23, 2005
Alistair Gordon, the Parrish Museum's Robert Lehman Curator and curator of the exhibition, will present an overview of this architect, his work on the East End, and his importance in 20th-century architecture. At the Parrish Museum. Call 631/283-2118 or visit www.parrishart.org.

CA/BOOM II: The State of Contemporary Design Now
Santa Monica, Calif.
July 28–31, 2005
This three-day event is dedicated to showcasing contemporary architecture and independent contemporary design. Professionals and design enthusiasts will be exposed to a stimulating array of contemporary and nontraditional architecture, interior design, furniture design, and landscape design through a provocative and entertaining mix of exhibition, guided home tours, and speaker conferences. At the Santa Monica Civic Auditorium. Call 310/306-6677 or visit www.caboom2.com.

Lecture: East End Dream House
Southampton, N.Y.
August 5, 2005
This talk with Alicia Longwell, Lewis B. and Dorothy Cullman Chief Curator, Art and Education, at the Parish Museum, will trace the history of domestic architecture in the Hamptons, focusing on the rise of the Hamptons beach house in the postwar period and the social and cultural trends that shaped this phenomenon. At the Parrish Museum. Call 631/283-2118 or visit www.parrishart.org.

GlassBuild America
Atlanta
September 13–15, 2005
The Glass, Window, and Door Expo will be held at



Where do you Rock?

CIRCLE 109 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ELDORADO STONE
A HEADWATERS COMPANY

www.eldoradostone.com/walkthrough
800.925.1491

the Georgia World Congress Center. For further information, visit www.glassbuild.com

Prague: 20th-Century Architecture in Transition
Prague
September 17–23, 2005
The AIA Committee of Design conference will explore design of buildings, sites, and the city in relation to political, social, cultural, and economic transitions and the permanence of the historic, climatic, and geographic environment. At the Hotel Alcron. For further information, visit www.aia.org.

Internship Conference: Designing Tomorrow's Architect
San Antonio
September 22–24, 2005
Seventy-five invited participants will include key leadership from each organization and a diverse group of stakeholders in the internship process. Cosponsored by the AIA and NCARB, the conference will be held at the historic Empire Theatre. For more information, visit www.designingtomorrowsarchitect.org.

ArtHouses: New Directions in Museum and Exhibition Design
Houston
September 28–October 26, 2005
A lecture series presented by the Rice Design Alliance. As the program for art has evolved over the past half-century, so has the design for spaces to exhibit that art. A new generation of architects has emerged to imaginatively address the challenges of designing for art of our time with bold and technically fascinating solutions that often include collaborations with the artists themselves. Lecturers include Brad Cloepfil of Allied Works Architecture, Tony Fretton of Tony Fretton Architects, Galia Solomonoff of OpenOffice: art + architecture collaboration, and David Adjaye of Adjaye/Associates. In Brown Auditorium at the Museum of Fine Arts. For additional information, call 713/348-4876 or visit www.rda.rice.edu.

Competitions

Shinkenchiku Residential Design Competition 2005
Deadline: July 13, 2005
A call for entries that explore new potential in architecture through the design of "the residence, a place for human dwelling." Two architects, Tadao Ando and Richard Rogers, will serve as judges. Visit www.japan-architect.co.jp/english/5info/topics/skcompe2005/skcompe2005.html.

2005 Brick in Architecture Awards
Deadline: July 15, 2005
Licensed architects are encouraged to submit their best work completed since January 1, 2000, in which brick is the dominant building material. Visit www.gobrick.com for further information.

Unbuilt Architecture Design Awards
Deadline: July 19, 2005
Any architect, architectural educator, or architecture student anywhere in the world may submit unbuilt client-sponsored and/or theoretical projects. For information, visit www.architects.org/awards.

2005 Pinnacle Awards Competition
Deadline: July 29, 2005
Sponsored by the Marble Institute of America, the competition covers four categories, including commercial exterior, commercial interior, residential interior/exterior, and renovation/restoration. For further information, call 440/250-9222 or visit www.marble-institute.com.

Juried Photo Exhibits at Build Boston
Deadline: August 1, 2005
All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. Visit www.architects.org/awards.

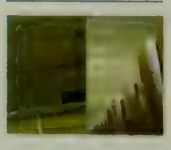
Honor Awards for Design Excellence
Deadline: August 4, 2005
Any built project or any type anywhere in the world by any Massachusetts architect is eligible, and any architect anywhere in the world may submit any project built in Massachusetts. Visit www.architects.org/awards.

Boston Foundation for Architecture: Grants for Public Education Programs
Deadline: August 10, 2005
An invitation to educators, community groups, other organizations, and creative individuals to submit grant proposals for public-education programs in Massachusetts related to planning, design, and the built environment. Call 617/951-1433 or visit www.bfagrants.org.



THERMAX* is here.

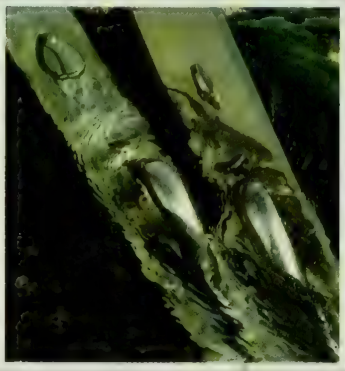
Call 1-866-583-BLUE (2583) or visit www.dowstyrofoam.com/architect.



*Trademark of The Dow Chemical Company

CIRCLE 110 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Stone River Bronze







door hardware • accessories
hinges • cabinet hardware
bath hardware
window & patio door

classic series • designer series

StoneRiverBronze.com

CIRCLE 111 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Dates & Events

The 22nd Antron Fiber Design Award
Deadline: September 16, 2005
This award program recognizes designers who are setting new standards of creativity in commercial interior design through the innovative use of carpet. Visit www.antron.invista.com/designwards.

Windscape: An Ideas Competition Envisioning Renewable Energy for Cape Cod
Deadline: September 30, 2005
The competition, led by a group of young designers, challenges participants to explore the notion of renewable energy and to better understand the environmental, visual, and other implications of the infrastructure of a wind farm. Visit www.architects.org/windscape.

2005 Source Awards
Deadline: December 2, 2005
This national lighting design competition, which focuses on furthering the understanding and function of lighting as a primary element in design, is open to all lighting designers, architects, engineers, interior and professional designers, and consultants who use Cooper Lighting fixtures in interior or exterior design projects. Visit www.cooperlighting.com.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com.

NATIONAL BUILDING MUSEUM AT NBM

lectures


MILLER HOUSE, COURTESY PRINCETON ARCHITECTURAL PRESS

July 12
Louis Kahn: Building Art, Building Science
Thomas Leslie, AIA, assistant professor of architecture at Iowa State University

July 21
Cameron Sinclair Design Like You Give A Damn
Cameron Sinclair, founder of Architecture For Humanity (AFH)

July 26
Richard Neutra and His Miller House
Stephen Leet, associate professor at Washington University

exhibitions


COURTESY LIBRARY OF CONGRESS, PRINTS AND PHOTOGRAPHS

Tools of the Imagination
through October 10, 2005

Kids' View of the City
Through July 17, 2005

Liquid Stone: New Architecture in Concrete
through January 29, 2006

Washington: Symbol & City
long-term exhibition

national building museum

401 F Street NW
Washington, DC 20001
202.272.2448
www.NBM.org

For more information and to register for programs, call or visit our website. Discounts for members and students.



Technology that's as powerful as your ideas.

BlackBerry 7250™ – with the most powerful processor yet.

- Access a variety of project management applications from ATSG, JumpStart Wireless™ and Corrigo™ wireless solutions
- Access office e-mail, scheduling tools and new HTML web browser – from just about anywhere
- Talk to associates with available Bluetooth® wireless headset technology
- Manage larger files and e-mail attachments with expanded memory

BlackBerry 7250™ | Only $199.99 after $100 Advanced Device Credit when activating selected combinations of 2-year voice plans & data features

Valuable corporate discounts available.

Visit a Verizon Wireless or Circuit City store or go to verizonwireless.com

1.800.VZW 4 BIZ

verizon wireless
We never stop working for you.

r Surcharges (incl. 2.37% Federal Universal Service (varies quarterly), 5¢ Regulatory/line/mo. & others by area) are not taxes (details: 1-888-684-1888); gov't taxes & our surcharges could add 6%-28% to your bill. Activation per line: $35/1yr; $20/2yrs.

portant Consumer Information: Subject to Customer Agreement, Calling Plan, terms and conditions of BlackBerry® product brochure and credit approval. $175 termination fee per line, other charges & trictions. Cannot combine with other offers. Coverage & offers not available in all areas. Must be within National Enhanced Services Coverage Area to send/receive e-mail. Details/maps at verizonwireless. n. Individuals with Desktop Redirector must have desktop PC on and in a condition to receive e-mail. Voice calls cannot be received when an e-mail or other data transmission is occurring. The BlackBerry l RIM families of related marks, images and symbols are the exclusive properties of and trademarks or registered trademarks of Research In Motion Limited – used by permission. **Phone Offer:** In CA: Sales based on full retail price of phone. While supplies last. Limited time offer. ©2005 Verizon Wireless

CIRCLE 112 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"The Pick of the Sustainable Crop," Architectural Record (07/05, page 153).** 075EDIT7

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through July 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit.
Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	**6.**	a	b	c	d
2.	a	b	c	d	**7.**	a	b	c	d
3.	a	b	c	d	**8.**	a	b	c	d
4.	a	b	c	d	**9.**	a	b	c	d
5.	a	b	c	d	**10.**	a	b	c	d

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ❑ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ❑ Visa ❑ Mastercard ❑ American Express **Card#**

Signature **Exp. Date**

Check below:

❑ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

❑ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**



THE BUSINESS OF ARCHITECTURE: 2003 AIA FIRM SURVEY

→ Access the latest, most comprehensive information on today's architecture marketplace

The Business of Architecture is the most reliable source of information on the business practices of U.S. architects. Responses from architecture firms nationwide have been compiled to bring you the latest financial benchmarks and management strategies of AIA-member-owned firms.

Major topics include: financial performance, services and sectors, marketing spending, professional liability, technology investment, and international practice.

This report organizes findings by region and firm size and includes charts and tables for fast, easy access to the information you need to stay competitive.

→ Visit *www.aia.org/econ_reports*

→ To order your copy, go to *aia.org* and click on AIA Store or call 800–365–2724.

AIA members: $125/PDF, $150/book
Retail: $329

McGraw-Hill CONSTRUCTION ENR

ENR 2005 TOP FIRM LEADERS FORUM

FALL SESSION

REGISTER TODAY!

Constructing in the 21st Century: New Ways to Think, New Ways to Build

September 28-29, 2005
Millennium Biltmore Hotel
Los Angeles

KEYNOTE SPEAKER:



Major General Charles E. Williams,
Director, Overseas Building Operations,
U.S. State Department



artners:

Autodesk · AIA · AON Construction Services Group

Sponsors:

BENTLEY · CMiC · Constructware 10 YEAR ANNIVERSARY

industry's leading contractors, engineers, architects, equipment
building product manufacturers, and building and facility
ers will gather to discuss trends, innovations and business
es. The Forum's interactive panel
ussions include:

- Can the Leaders of an Industry Change the Way Their Business Works?
- Building Information Modeling: Owners, Architects, Engineers and Contractors Confront the Future, Today
- The Future Workforce: What Are They Learning? What Should They Be Learning?
- LEED: Green and Environmentally Sensitive and ... Worth It?

a complete list of panelists or to register, visit the Forum
site. **www.construction.com/event/**
212-904-4634 or E-mail: chuck_pinyan@mcgraw-hill.com

Confirmed Panelists include:

Gerry Salontai, CEO, Kleinfelder
Dennis Shelden, CIO, Gehry Technologies
Ron Austin, Senior Project Manager, Miami Performing Arts Center
Jeffrey S. Russell, Chair, Civil and Environmental Engineering, University of Wisconsin-Madison
David Meckel, AIA, Special Assistant to the President, California College of the Arts
Barbara Jackson, Construction Management Department, College of Architecture and Environmental Design, California Polytechnic State University
Rod Wille, Senior Vice President, Manager of Sustainable Construction, Turner Construction Co.
Ray Landy, President, DMJM H&N
Mona Field, Member, Board of Trustees, L.A. Community College District

necting people_projects_products

McGraw-Hill CONSTRUCTION
Dodge
Sweets
Architectural Record
ENR
Regional Publications

l us online at www.construction.com

6/05

The McGraw-Hill Companies

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"From Quarry to Residential Countertop," (07/05, page 175)** 075SPONM

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through July 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit.
Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	e	**6.**	a	b	c	d	e
2.	a	b	c	d	e	**7.**	a	b	c	d	e
3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ❑ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ❑ Visa ❑ Mastercard ❑ American Express **Card#**

Signature **Exp. Date**

Check below:

❑ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

❑ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"Green Product Evaluation Necessitates Making Trade-offs," (07/05, page 181)** 075SPONU

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through July 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit.
Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	e	**6.**	a	b	c	d	e
2.	a	b	c	d	e	**7.**	a	b	c	d	e
3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ❑ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ❑ Visa ❑ Mastercard ❑ American Express **Card#**

Signature **Exp. Date**

Check below:

❑ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

❑ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"Silence is Golden: Controlling Sound in Non-Residential Structures," (07/05, page 169)** 075SPONW

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through July 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit.
Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	e	**6.**	a	b	c	d	e
2.	a	b	c	d	e	**7.**	a	b	c	d	e
3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ☐ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ☐ Visa ☐ Mastercard ☐ American Express **Card#**

Signature **Exp. Date**

Check below:

☐ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

☐ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"Specifying Ceilings: From Classic to Curved," (07/05, page 187)** 075SPONC

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through July 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit.
Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	e	**6.**	a	b	c	d	e
2.	a	b	c	d	e	**7.**	a	b	c	d	e
3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ☐ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ☐ Visa ☐ Mastercard ☐ American Express **Card#**

Signature **Exp. Date**

Check below:

☐ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

☐ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**

ADVERTISEMENT

TO ADVERTISE: Contact Deidre Alle
T: (212) 904-2010 / F: (609) 426-713
deidre_allen@McGraw-Hill.co

European Cobblestone

2 Site construction



Eurocobble

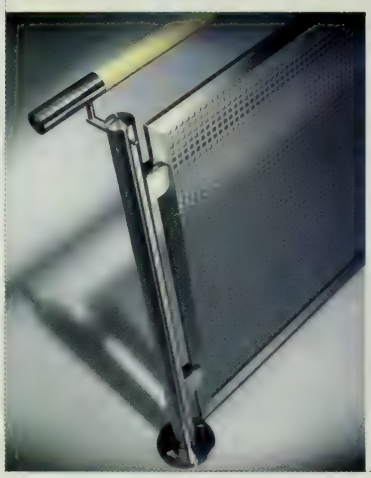
An updated catalog features authentic European cobblestone preassembled in modular form. Modules in square, fan, concentric ring, and custom formats arrive at the job site ready for a quick and easy installation. Pedestrian or vehicular application. Eurocobble® has supplied the design community with traditional and customized paving solutions for over 20 years. Call toll free or visit the Web site.

877-877-5012
www.eurocobble.com

Circle Reader Service #150

Pre-Engineered Railings

5 Metals



Handrail Design, Inc.

CIRCUM™ stainless railing system Manufactured of corrosion-resistant stainless steel, CIRCUM is ideal for interi or exterior applications in commercial and residential facilities. Infill panels available in, but not limited to, perforated stainless steel, tempered glass, and stainless steel rods. Handrails in wood/stainless, stainless, or colored nylon. Curved rails and custom designs are available. HDI Railing Systems. Email info@hdirailings.com

717-285-4088
www.hdirailings.com

Circle Reader Service #153

Commercial Grade Outdoor Furniture

2 Site construction



Modern Outdoor

High style, clean-lined simplicity, short lead times, environmentally conscious materials—these are the attributes of Modern Outdoor—a producer of top quality outdoor furniture with a definitive modern aesthetic. The Modern Outdoor Collections are commercial grade products designed for the restaurant, hospitality, and resort industries, with an aesthetic that is perfect for a residential client's backyard setting. The entirety of the Collection is made from Ipe, Electropolished Stainless Steel and Natural Composite materials. Modern Outdoor offers attractive pricing.

818-838-7060
www.modernoutdoor.com

Circle Reader Service #151

Architectural Columns, Balustrades & Mouldings

6 Wood & plastics



Melton Classics, Inc.

Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, mouldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers a maintenance-free balustrade product ideal for any application.

800-963-3060
www.meltonclassics.com

Circle Reader Service #154

Architectural Cladding System

4 Masonry



Boston Valley Terra Cotta Inc.

A "green" architectural cladding system delivering the advantages of rain screen performance while retaining the beauty and richness of terra-cotta. Terraclad is a fired ceramic material produced in the U.S. in new state of the art facilities, Boston Valley Terra Cotta Company, Orchard Park, NY. Available in colors, sizes and patterns to match the designer's imagination.

888-214-3655
www.bostonvalley.com

Circle Reader Service #152

Cabinet Accessories

6 Wood & plastics



Rev-A-Shelf Inc.

Designed to complement today's traditional and tuscan kitchen decor, the Vineyard Series in the Artisan Collection was chosen for the complementary mouldings and endless cabinet industry accessories available in the market today. The Vineyard Series includes a line of products for decorative molding inlays, galley rail fencing, Lazy Susan fencing, and custom pull-out shelf fencing. Available in both bronze and pewter finishes, their stylish line of decorative organizers marries two of the most talked about issues in kitchen design—fashion and organization.

800-626-1126
www.rev-a-shelf.com

Circle Reader Service #155

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASP

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Bamboo Flooring, Panels & Veneer

6 Wood & plastics



Teragren LLC

Teragren, the largest U.S. manufacturer of bamboo flooring, furniture panels, and veneer, introduces SYNERGY Strand bamboo flooring. A unique patented manufacturing process utilizing bamboo strands yields a flooring plank 100% harder than oak—ideal for high traffic and commercial installations. Available in Wheat or Chestnut colors in solid strip or wide plank. Coordinating stair parts and moldings. All Teragren bamboo products meet stringent E1 and U.S. environmental standards and qualify for LEED™. Call for brochure.

800-929-6333
www.teragren.com

| Circle Reader Service #156

Retractable Roof Structures

7 Thermal & moisture protection



OpenAire Inc.

Custom-designed retractable roof structures and operable skylights capable of spanning up to 140-ft. At the touch of a button, motorized panels retract to open up to 50% or more of the roof area. OpenAire can span up to 140-ft. and do custom designs (domes, barrel vaults, biparting etc.) using its exclusive maintenance-free, thermally broken aluminum framing. These enclosures and operable skylights are perfect for indoor waterparks, pools, atria and anywhere that you want to bring the outside in.

www.openaire.com

| Circle Reader Service #159

Tall Wall Systems

6 Wood & plastics



Trus Joist, A Weyerhaeuser Business

Trus Joist's tall wall system offers architects, designers and builders, walls 10- to 30-ft. in height, allowing spacious, open floor plans. The design of a tall wall system using TimberStrand® LSL and Parallam® PSL technologies provides a wall that will start straight, stay straight and deliver predictable performance. Visit Trus Joist, A Weyerhaeuser Business at www.trusjoist.com or call 800-338-0515.

800-338-0515
www.trusjoist.com

| Circle Reader Service #157

Roof Penetration Flashings

7 Thermal & moisture protection



SBC Industries

SBC Industries has developed a complete line of easy-to-install roof penetration flashings that replace pitch pans known to require maintenance and commonly cause roof failure. They are approved and endorsed for use in warranted roofs by a number of system manufacturers. These stainless steel flashings are compatible with most materials and are the answer to problems with flashing of angle irons, I and H beams, pipes, square tubing, channels, conduits, coaxial and lightning cables, and struts. Available in either a split or a slipover design.

800-228-2580
www.sbcflashings.com

| Circle Reader Service #160

Snow Guards

7 Thermal & moisture protection



Alpine SnowGuards

Alpine SnowGuards' model #10 snow guard set the standard for snow guard performance and design when it was first introduced. Designed for slate, flat tile, cedar, and other shingle style roofs, the #10 snow guard is both functional and aesthetically pleasing. Ease of installation and minimal maintenance make it a favorite to customers all over the world. The #10 is available in copper, lead-coated copper, zinc, galvalume, aluminum, and painted aluminum which makes this snow guard the perfect complement to any roofing material. Layout and installation recommendations are available from Alpine's sales staff.

888-766-4273
www.alpinesnowguards.com

| Circle Reader Service #158

Crystallized Glass Ceramic Architectural Panels

7 Thermal & moisture protection

Technical Glass Products

Neopariés® and Neopariés® LT are lighter yet stronger than granite. Commonly used for cladding interior and exterior walls, they are virtually impermeable and not subject to freeze-thaw damage, penetration by rust, or stains from graffiti or pollution. Contact Technical Glass Products by their toll-free number, or web site.



888-397-3473
www.fireglass.com

| Circle Reader Service #161

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Aluminum Frame Glass Doors

8 Doors & windows



Architectural Products by Outwater, LLC

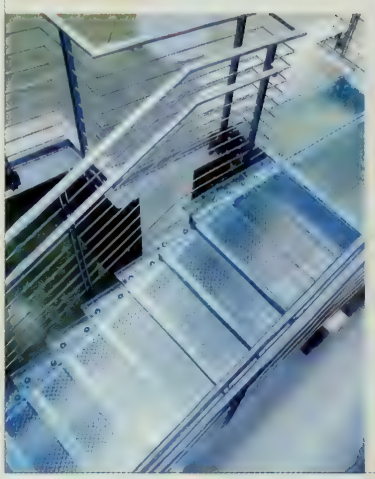
Available in a variety of scratch- and discoloration-resistant anodized aluminum, or brushed stainless steel frame profiles in conjunction with numerous visually diversified 5/32-in.-thick tempered, or safety-backed glass insert options that offer varying transparencies and reflective properties, Outwater's European-designed, U.S.-manufactured Aluminum Frame Glass Doors are delivered fully assembled with short lead times. Thoroughly cost competitive with wood doors, these are made to order in 1/16-in. height and width increments in any desired quantity, and come with a limited lifetime warranty.

800-835-4400
www.outwater.com

Circle Reader Service #162

Glass Staircases

8 Doors & windows



Nathan Allan Glass Studios, Inc.

A spectacular four-story corporate staircase project! 80 treads and 20 landings, using Cast Glass "Checkerplate" textures (Diamondplate), with two layers of 5/8-in.-thick tempered glass. The walking surface has an exclusive "Glass Sandpaper" safety finish. The finished product is engineered. Big D Construction, Corporate Headquarters—Salt Lake City, UT.

604-277-8533
www.nathanallan.com

Circle Reader Service #165

High-Performance Translucent Building Systems

8 Doors & windows



Kalwall Corporation

Gathering LEED™ points through daylighting can greatly impact any project. Kalwall's highly insulating, diffuse-light transmitting, translucent skylights, wall systems and replacement windows are uniquely suited to achieve the desired results. The use of Kalwall can contribute points in the categories of Sustainable Sites, Energy & Performance, Materials & Resources, and Indoor Environmental Quality.

800-258-9777
www.kalwall.com

Circle Reader Service #163

Glass Design Products

8 Doors & windows



Oldcastle Glass

With innovative technology, Oldcastle Glass® creates products that satisfy both performance and design needs. These include highly visual design products like Stackwall's™ soaring structural glass walls and Bentemp's® dramatic glass curves, as well as high performance products for blast mitigation solutions, and their exclusive StormGlass™, one of the most advanced hurricane-resistant glazing available. With over 40 North American locations, Oldcastle Glass® has the products you want, when and where you need them. Photo courtesy of the Clinton Foundation.

866-653-2278
www.oldcastleglass.com

Circle Reader Service #166

Window Covering Treatments

8 Doors & windows



MechoShade Systems, Inc.

With over 30 years experience, MechoShade® is one of the leading single-source manufacturers of complete integrated solar shading systems, controls and daylighting solutions. They offer a wide variety of control solutions for commercial and residential applications. From simple line voltage switches to networked, addressable, building-wide controls, MechoShade offers a variety of solutions including integration into 3rd party Lighting, BMS and A/V Systems. With over 100 visually transparent shade cloths in various weaves, densities and colors, they can meet any performance or design requirement.

718-729-2020
www.mechoshade.com

Circle Reader Service #164

Hardware Accessories

8 Doors & windows



Stone River Bronze

The Metropolitan Designer Series hardware options cover doors, windows, and cabinet accessories. Design highlights include unique casting detail, multiple finishes and texture options, matching bronze screws, strikes, and faceplates, and bronze template mortise hinges. Their Window & Patio Door program offers the most comprehensive and authorized hardware options in the industry. Beyond the cosmetic detail, Stone River Bronze products offer several patent pending features and a lifetime warranty. Please visit StoneRiverBronze.com.

www.stoneriverbronze.com

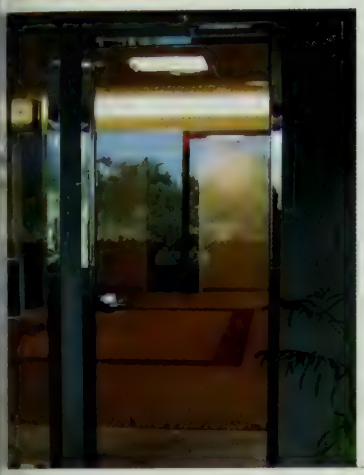
Circle Reader Service #167

ADVERTISEMENT

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Fire-Rated Doors

8 Doors & windows



VETROTECH Saint-Gobain

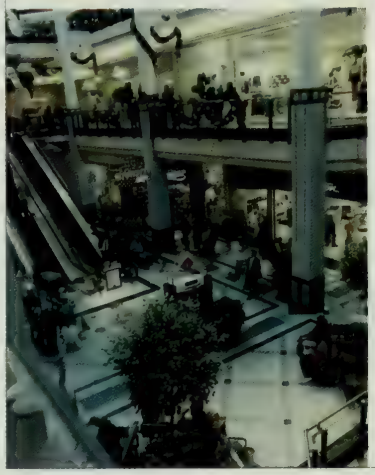
Architects want creative freedom and maximum transparency, while at the same time respecting fire resisting building regulations. Vetrotech Saint-Gobain introduces the world's first 20-minute ALL-GLASS fire-rated door. Manufactured with SGG PYROSWISS EXTRA glass technology, furnished with a complete hardware package and available in a variety of finishes. In tempered safety glass (CPSC CAT II), two sizes are available—3-ft. by 7-ft. and 3-ft. by 8-ft. in 3/8-in. or 1/2-in. glass thickness. Contact VETROTECH Saint-Gobain at their Web site.

888-803-9533
www.vetrotechUSA.com

Circle Reader Service #168

Granite & Limestone Materials

9 Finishes



Ancor Granite Tile Inc.

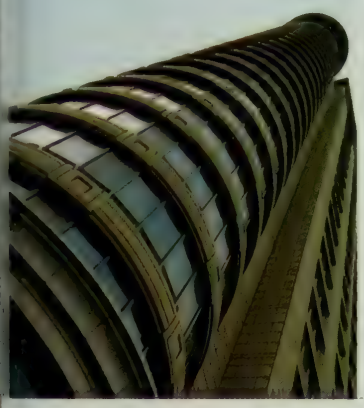
Ancor Granite Tile is now pleased to afford you the design freedom and distinction you have been denied to date. Think of custom sizes: 12-in. by 16-in., 12-in. by 18-in., 16-in. by 24-in. in over 100 granite and limestone materials. Ancor is pleased to offer tiles up to 24-in. by 24-in. and sizes in between from 3/8-in. to 1-1/4-in. in thickness, in a variety of finishes from high polish to matte, textured and antiqued. Put their 20 years' of specialization to work for you. Usher in a new age of stone design. Contact Ancor to discuss an upcoming project idea; they look forward to hearing from you.

www.ancor.ca

Circle Reader Service #171

Windows

8 Doors & windows



Wausau Window and Wall Systems

Designed by Lucien Lagrange, Chicago's 840 North Lakeshore's luxury high-rise presents a distinguished silhouette on the skyline. Its stone façade is dotted with Wausau's 4250 Series windows and features a castle-worthy, window-encircled rotunda. The windows' distinctive aesthetic detailing also delivers high-performance comfort withstanding the Windy City's demanding environmental challenges.

877-678-2983
www.wausauwindow.com

Circle Reader Service #169

Decorative Wall Panels

9 Finishes



Kemlite Company

frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture-resistant frp panel with a decorative finish that includes myriad colors, patterns, and woodgrains, as well as a tile-look panel. Available with over 500 hundred choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com

Circle Reader Service #172

Wood Interior Windows & Doors

8 Doors & windows



Weather Shield Windows & Doors

Engineered with unique features and built for unparalleled performance, the Weather Shield Legacy Series is simply one of the best window and door lines available for custom and luxury homes. Available in tilt double-hung, casement, awning, and direct-set windows and French doors, the premium windows feature elegant wood interiors in a variety of wood species from Weather Shield's Custom Wood Interiors Collection™.

800-477-6808
www.weathershield.com

Circle Reader Service #170

Decorative Finishes

9 Finishes



Nevamar Company, LLC

Mysterious, sexy, and illuminating, new Nevamar Manhattan laminate actually appears to emit light from within. With their exclusive Armored Protection™ Surface, it meets all NEMA performance standards, so it's suitable for horizontal and vertical applications. Available in three natural metallic hues, Manhattan is among the 18 new additions to the broad Nevamar line.

800-638-4380
www.nevamar.com

Circle Reader Service #173

TO ADVERTISE: Contact Deidre Alle
T: (212) 904-2010 / F: (609) 426-713
deidre_allen@McGraw-Hill.co

Cork & Linoleum Floating Floors

9 Finishes



Nova Distinctive Floors

Nova Cork and Linoleum Floating Floors embrace design, function and environmental consciousness. In 1-in. by 3-in. 'klick' (glueless) system planks, Nova Distinctive Floors' 2005 line boasts 28 designer patterns in cork and the bold 9 linoleum colors with accent tiles. Harvested from forests that meet environmental, social and economic standards, Nova Cork, Linoleum, and Underlayment products have received the "Green Spec" distinction from Building Green, Inc as well as FSC and SCS certifications and offer a 20-year residential and 10-year commercial warranty.

866-576-2458
www.novafloorings.com
AIA booth 1384

Circle Reader Service #174

Modular Sign Systems

10 Specialties



APCO Graphics

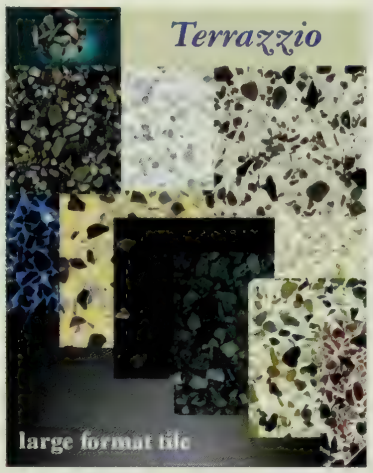
Since 1966, APCO has been a leader in the design and manufacturing of modular sign systems. Their award winning products are guiding people through facilities worldwide. Their product line includes interior and exterior sign systems, directories, and ADA-compliant solutions. Each line is backed with commitment, quality and innovation. With headquarters and manufacturing in Atlanta, APCO has offices across the nation and worldwide.

404-688-9000
www.apcosigns.com

Circle Reader Service #177

Authentic Terrazzo

9 Finishes



Surface Elements

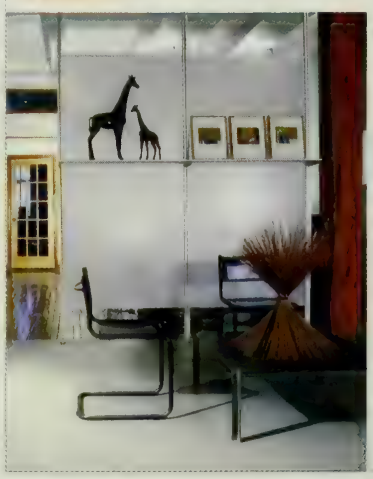
Terrazzio is an Authentic Terrazzo used for floors, counter tops and as an exterior wall panel. Terrazzio is first manufactured as a 4-ft. by 8-ft. by 1/4-in. bisque then polished and cut to your specifications. With twelve 'time tested' traditional colors, and twenty-two vibrant contemporary colors, Terrazzio has the beauty and durability of traditional terrazzo with today's warm tones and refreshing colors. Terrazzio is ideal for schools, dazzling 'up scale' restaurants and retail stores.

931-845-3434
www.Terrazzio.com

Circle Reader Service #175

Compression Support Pole

10 Specialties



Rangine Corporation / Rakks

The latest addition to the Rakks family of shelving hardware is the PC4 floor-to-ceiling compression support pole. Shown here with Rakks shelf support brackets and extruded aluminum shelf, this pole features threaded compression mounts and can accommodate floor to ceiling heights of up to 12-ft. When properly anchored to the ceiling, this pole can function as both a room divider and shelving system—perfect for lofts and apartments.

www.rakks.com

Circle Reader Service #178

Ceramic Floor Tiles

9 Finishes



Viva Ceramica

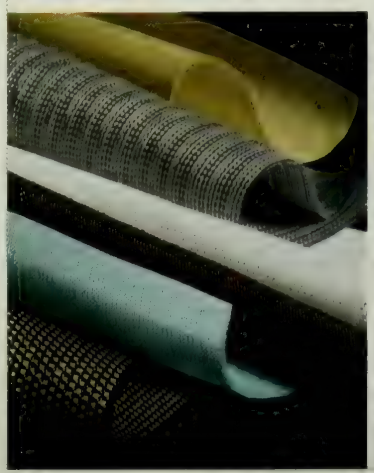
TEXTURA tiles, where colors meet the purest clay, forged and pre-compacted in a higher than normal thickness (11-mm). Complete penetration between body and color grants lasting optical results, maximum ultimate tensile strength and absolute resistance to acids, scratches, frost and dirt. Their completely environmentally-friendly manufacturing process is assured by the ISO9001 quality system. The TEXTURA series is guaranteed 20 years for private homes and 10 years for public areas. Proudly manufactured in Italy.

www.cerviva.it

Circle Reader Service #176

Textiles

12 Furnishings



Carnegie

Carnegie's Xorel remains a major force after 23 years in the textile industry. This revolutionary textile has been updated with fresh color palettes and exciting new patterns for wallcoverings, panels and upholstery. Made of 100% woven polyethylene, Xorel contains no PVC, chlorine, plasticizers, heavy metals, topical finishes, or ozone depleting chemicals. Xorel. Beautiful. Functional. Sustainable. Brochure available.

800-727-6770
www.carnegiefabrics.com

Circle Reader Service #179

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Metal Plumbing Fabrication

13 Special construction



Diamond Spas

Diamond Spas specializes in metal plumbing fabrication. The DSI line consists of soaking baths, whirlpool baths, Japanese baths, shower pans, lavatories, kitchen sinks and spas/hot tubs. What sets Diamond Spas apart from other manufacturers is their ability to customize. Every bath fixture or spa is designed and built specifically for the client. Your visions become reality when Diamond Spas is part of your project. DSI has the talent and expertise to create artistic, sophisticated, highly durable products for the upscale home.

800-951-7727
www.diamondspas.com

Circle Reader Service #180

Elevator Door Facings

14 Conveying systems



Gage Corporation, Intl.

ECO-NOR offers six distinctive pre-decorated elevator door facings in 18-ga. stainless steel. ECO-NOR is competitively priced, making it an ideal choice for remodeling or budget sensitive projects. Finishes of all designs complement existing or new #4 stainless steel frames. ECO-NOR offers prompt lead times without the need for prior specification. ECO-NOR is a product of Northern Engraving Corporation. Fax number 608-269-7622 Email gage@centurytel.net

800-786-4243
www.eco-nor.com

Circle Reader Service #183

Saunas

13 Special construction



Finlandia Sauna Products, Inc.

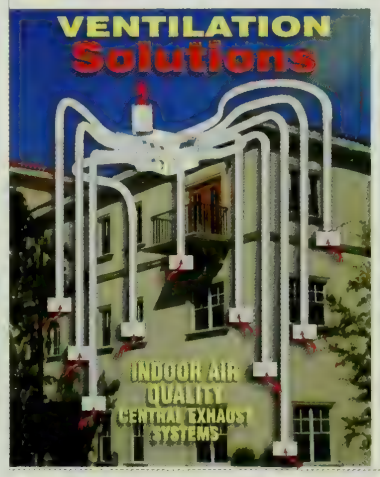
Finlandia Sauna has manufactured exclusive and authentic saunas since 1964. Finlandia offers precut sauna packages and modular sauna rooms as an affordable luxury that can be included in any remodel or new construction. The company markets four all-clear western softwoods and is the only manufacturer to use 1-in. by 4-in. paneling, instead of the cheaper 1/2-in. by 4-in. material used by others. Finlandia's packages include all room parts, a choice of a Finnish made electric heater, a prehung door with choice of glass, and all necessary accessories.

800-354-3342
www.finlandiasauna.com

Circle Reader Service #181

Exhaust Ventilation Systems

15 Mechanical



American Aldes Ventilation Corp.

American ALDES manufactures central bath and IAQ exhaust ventilation systems for multifamily housing. Similar to the popular ALDES single-family systems, the energy efficient MPV multiport ventilators prevent mold growth caused by activity based indoor humidity levels. The silent and low continuous background ventilation rates are controlled by the MPV Multi's self-regulating air duct system. This guarantees precise IAQ control and energy efficiency for the owner. Installers appreciate the pre-calibrated and self-balancing feature of the MPV system.

800-255-7749
www.americanaldes.com

Circle Reader Service #184

Elevator Systems

14 Conveying systems



Custom Cab Industries

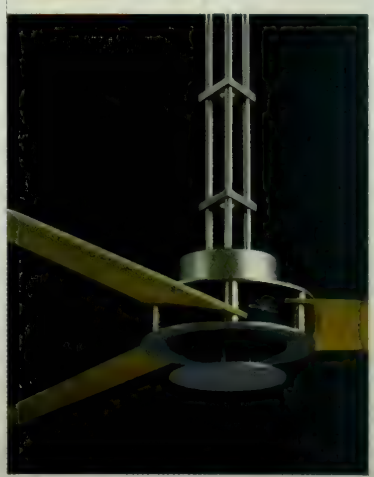
Turn your Residential/Commercial Elevator Dreams into reality. CCI will turn your dreams into reality. They have the resources to design, manufacture, and install your dream Elevator system.

619-205-1000
www.customcabsind.com

Circle Reader Service #182

Architectural Ceiling Fans & Lighting

16 Electrical



G Squared

Balanced design that pleases the eye, and creates a mood and a gentle breeze. Moving sculpture: The San Francisco ceiling fan, a GOOD DESIGN Award winner. Whisper quiet, powerful and beautifully made, this timeless design can be used on 8-ft. ceilings or on cathedral ceilings with optional downrods up to 6-ft. long. Suitable for sloped ceilings up to 29 degrees. Lifetime warranty. To buy high-design architectural fans and lighting please visit G Squared's website or call between 7 A.M. and 6 P.M. PST.

877-858-5333
www.g2art.com

Circle Reader Service #185

CLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

POSITION VACANT

Architectural Designers
Project Managers
Construction Administrators

Van Tilburg, Banvard & Soderbergh, AIA (VTBS) is an award winning design firm with offices in Santa Monica, Denver and San Francisco. We are seeking several 'highly qualified' professionals with experience in the design of low to high-rise multi-family, mixed-use, and office projects. Openings are available in each office.

Candidates should have a minimum of ten years relevant experience, excellent communication skills and be Autocad proficient. A professional degree and license/certification is preferred.

VTBS offers a highly competitive compensation package, excellent benefits including a 401k plan with employer contributions. Relocation assistance may be provided. We have an energetic group of people and each office is located in a vibrant urban setting.

Please fax resumes to: (310) 394-2424
or e-mail to: resumes@vtbs.com
Notate the office location and the position that interests you.

Got Design?

Seeking highly creative and talented **Design Architects** to join an exciting, fun, motivated and fast paced team within an $11 billion Private Corporation in San Antonio, TX.

Join our design studio and help create breakthrough retail design solutions for the best food retailer in the nation. This position demands exceptional design and presentation skills that could be described as original, innovative, unique, and honest. A sound technical background and a min of 5 years design exp is req. Work tasks range from concept planning through complete design development.

If you have creative ideas and can design, this is a great place for you! Great compensation and benefits.

Please email resume and work samples to:
larson.craig@heb.com

H-E-B is an EOE/Drug Free Workplace

"Where Each and Every Person Counts"

Pen and Ink Artist

Genesis Studios, Inc., a leading architectural visualization firm in Orlando Florida is seeking a skilled pen & ink artist with an architectural degree who has very strong conceptual design capabilities. Must be able to interface with clients to transform their thoughts to convincing drawings. Must draw entourage well and conceptualize design with speed. Opportunity to work on varied interesting projects. Credit and individual recognition for accomplishments.

Very Generous Salary, Benefits, Relocation Compensation. Send Resume and Examples to:

Genesis Studios, Inc.
465 Maitland Ave., Altamonte Springs, FL 32701
or Email: info@genesisstudios.com
See our website at:
www.genesisstudios.com

GENESIS STUDIOS, INC.

archrecord.construction.com

Two Professors of Architectural Design

School of Architecture, Urban Design and Landscape Architecture (Appointment Available Fall 2005 or Spring 2006)

The CCNY School of Architecture seeks two distinguished design professionals with teaching experience for its new Masters Programs in Architecture. The candidates must have experience in undergraduate and graduate studio teaching and offer evidence of published and notable built work. Ability to teach courses in related fields, such as theory, environment and/or technology is required. These are full time tenure track positions.

The School of Architecture, Urban Design, and Landscape Architecture is deeply committed to social concerns in practice, as well as to providing access to the finest education in the art and technology of architecture, urban design and landscape architecture to the broadest and most diverse student population. The faculty members we seek should be prepared to participate in and enhance this unique and lively intellectual atmosphere.

Requirements: For consideration, candidates must be registered architects with a Masters Degree and/or possess a PhD. In addition to graduate-level teaching in design and another relevant field, prominence in practice and/or scholarship is required.

Rank and salary commensurate with qualifications and experience. Positions opened until filled.

Please send curriculum vitae, three (3) letters of recommendation, and a portfolio of selected work to: **Professor Garrison McNeil, Chair, Masters Program Search (PVN# FY-10563), The School of Architecture, Urban Design and Landscape Architecture, The City College of New York, Shepard Hall Rm 103, 160 Convent Avenue, New York, NY 10031.**

For more information, please visit the College's website at: www.ccny.cuny.edu/positions

The City College/CUNY is an EEO/AA/IRCA/ADA Employer.

CITY COLLEGE IS CUNY

POSITIONS AVAILABLE

INTERIOR DESIGNER

Needed by architecture firm; BA + exp; excellent pay; Resume to: The Neiman Group, 2930 Westwood Blvd., Suite 100, Los Angeles, CA 90064

PROJECT DESIGNER

Construction plans for land dev/municipal projects, roadways, utility lines. BS Civil Eng or Arch & 4yr exp. Locale: Dallas, TX. Email resume: msansal@yahoo.co.uk

ARCHITECTURAL DESIGNER

Prepare architectural drawings, construction documents, site plans, presentation models and renderings utilizing computerized design software (e.g. AutoCAD, Photoshop, 3-D Max) for a wide variety of buildings. Requires a Bachelor's Degree in Architectural Engineering and 1 year of experience. Mail resume to: Lee & Sakahara, 16842 Von Karman Ave., #300, Irvine, CA 92606 or fax (949) 261-1144.

ARCHITECTURAL DESIGN DRAFTSMAN

Requires ability to prepare working plans and detail drawings from rough detailed sketches and notes according to specified dimensions. Must have knowledge of architectural practices, mathematics and building materials to complete drawings, using computer assisted drafting software programs and equipment. Requires BS in Architectural/Engineering or related field. Please submit resume to Hayer Architecture, Inc., 2120 Fourth Ave., San Diego, CA 92101.

PRINCIPAL ARCHITECT/ DESIGN DIRECTOR

Lead and manage the design of Biopharmaceutical R&D facilities for the global industry organization of Lockwood Greene. The ideal candidate should have proven track record with a substantial portfolio of noteworthy research facilities designed for fortune 100 biopharmaceutical companies and universities involved with NIH related research. Responsibilities include marketing, programming, and design and project management. Masters Degree preferred, minimum of 20 years experience. International travel required. Send resumes to Lockwood Greene 270 Davidson Avenue Somerset, NJ, 08873 attention: Robert K. Orgera or e-mail to rorgera@lg.com. No agencies or phone calls, please. An equal opportunity employer, M/F/D/V

ARCHITECTURAL DRAFTER BOCA RATON, FL/ MULTIPLE OPENINGS

Prepare detailed drawings of architectural designs and plans for buildings and structures according to specifications provided by architect; draw rough and detailed plans to scale, for foundations, buildings and structures, according to specifications; prepare colored drawings of landscape and interior designs for presentation to client; lay out and plan interior room arrangements for commercial buildings, and draw charts, forms and records using computer assisted equipment; develop diagrams for construction, fabrication and installation of equipment, structures, components and systems using field documents and specifications; lay out schematics and wiring diagrams used to erect, install and repair establishment cable and electrical systems using computer equipment; and use AutoCAD 2000, MS PowerPoint and Adobe PhotoShop. Req'd Bach (or foreign edu. equiv.) in Architecture plus 1 year relevant exp. Send resume to: Miklos and Associates, P.A., 2263 N.W. Boca Raton Blvd, Ste 112, Boca Raton, FL 33431.

WWW.SMPSCAREERCENTER.ORG

Find marketing/BD professionals with A/E/C exper. Call 800-292-7677, ext. 231.

ARCH. DSGNR

R'sch, plan, & dsgn projects for clients. Req'd: MS in Arch/Urban Dsgn & 1 yr. exp. Resumes: Siris Coombs Architects, 212.580.8916 Attn: J. Siris.

SENIOR PROJECT ARCHITECT – EDUCATION FOCUS

Northern California – Our office of 56 is located in the Sierra Nevada foothill community of Placerville, centrally positioned between Sacramento and South Lake Tahoe. We are looking for a registered architect with project management, leadership and communication skills as well as an in-depth knowledge of the production of K-12 projects. Ten years experience, minimum. Visit our website: www.murraydowns.com Send resume to: jobs@murraydowns.com or fax: 530.626.1931

ARCHITECT

Top Baltimore A/E firm seeks registered architect w/8+ yrs exp. in healthcare facilities for project manager role. Great atmosphere, excellent tech support, & comprehensive benefits, incl. 401K match, life/health, dental/vision & more. Check us out at www.wbcm.com. Come interview with us & see your future. Compensation negotiable. Send resume to Whitney, Bailey, Cox & Magnani, Attn: Kim Froehlich, 849 Fairmount Ave., Ste. 100, Baltimore, MD 21286; Fax 410-324-4112 or kfroehlich@wbcm.com

BUSINESS OPPORTUNITIES

SMALL CALIFORNIA FIRM FOR SALE

Located 20 miles south of Palm Springs, Indio, fastest growing city in CA. Established 30 years, only architectural firm in city, owner nearing retirement Information: carlmancox@aol.com

PART OWNERSHIP AVAILABLE

In Engineering, Architectural, Environmental, Design-Build Firms in several US Cities, for details send resume to: Rogier Associates, 111 East 54th Street, Indianapolis, IN 46220. (317) 267-8200

OFFICIAL PROPOSALS

REQUEST FOR PROPOSALS

Architect and Art Conservator for renovation of historic adobe structure and World Ware II German POW Wall murals. Architect will be required to provide evidence of previous adobe restoration and to conform to requirements of Texas Historical Commission. The building is listed on the National Register of Historic Places. To receive RFP Package information contact: William McDonald, Architec, Architectural Coordinator International Woman's Art Foundation P. O. Box 6671 San Antonio, TX 78209 Tel: 210-281-9559 Fax: 210-824-0446

SPECIAL SERVICES



archrecord.construction.com

Cost estimating data you can count on!

The 2005 Sweet's Cost Guides



CALL 1-888-264-2665

Please specify priorty code 444T

McGraw-Hill CONSTRUCTION Sweets

BNi Building News

1612 S. Clementine, Anaheim, CA 92802

www.bnibooks.com

ADVERTISERS INDEX

Bold: *Indicates Page Number.* *Italic: Indicates Reader Service Number.* S: *Indicates Sweets Marketplace Participation*

254	*103*	S	3form *3-form.com*
37	*22*		Academy of Art University *academyart.edu*
195	*71*	S	Adams Campbell Co *adamscampbell.com*
228	*82*	S	Advance Lifts *advancelifts.com*
180			AIA *aia.org*
166			AIA *aia.org*
227			AIA *aia.org*
264			AIA *aia.org*
16	*10*	S	Alcan Composites USA Inc *alucobond.com**
34	*19*		ALKCO Lighting *alkco.com*
14			Architectural Record *archrecord.construction.com*
69	*46*	S	Architectural Woodwork Institute *awinet.org*
34	*118*		Ardee Lighting *ardeelighting.com*
cov2	*1*	S	Armstrong *armstrong.com*
244	*91*	S	ATAS International Inc *atas.com*
81			Autodesk *autodesk.com*
157	*59*	S	Avonite *avonite.com*
159	*60*		Avonite *avonite.com*
41	*26*		B-K Lighting *bklighting.com*
198	*73*		Beam *beamvac.com*
256	*105*	S	Belden Brick Company, The *beldenbrick.com*
10-11	*7*	S	Bendheim *bendheim.com*
227	*81*		Blanco *blancoamerica.com*
275			BNi Building News *bnibooks.com*
40	*25*		Building Systems Design *bsdsoftlink.com*
247	*92*	S	Carl Stahl Décor Cable *decorcable.com*
228			Cascade Coil Drapery *cascadecoil.com*
203	*74*	S	Cedar Shake & Shingle Bureau *cedarbureau.org*
186	*68*	S	Ceilings Plus *ceilingsplus.com*
150	*57*	S	CR Laurence Co Inc *crlaurence.com*
205	*75*		Dacor *dacor.com*
cov3			Dell *dell.com*
209	*76*		Delta *deltafaucet.com*
39	*24*		Dornbracht *dornbracht*
60	*40*		Doug Mockett & Company Inc *mockett.com*
250	*97*		Doug Mockett & Company Inc *mockett.com*
259	*108*	S	Dow Chemical Company *dowstyrofoam.com**
257	*106*	S	Dow Chemical Company *dowstyrofoam.com**
261	*110*	S	Dow Chemical Company *dowstyrofoam.com**
50	*32*		Dow Corning *dowcorning.com*
49	*31*		DuPont Tyvek *tyvek.com*
249	*95*		East Teak Trading Group Inc *eastteak.net*
260	*109*	S	Eldorado Stone *eldoradostone.com*
36	*21*		Fabral Metal Wall and Roof Systems *fabral.com*
74-75	*48*		Gardco Lighting *sitelighting.com*
43	*28*	S	Georgia-Pacific *gp.com*
219	*78*	S	Ginger *motiv.us*
240A-D			Gypsum Association *gypsum.org*
229	*84*	S	Hafele *hafeleonline.com*
164-165	*63*		Hambro *hambrosystems.com*
225	*80*		Hansgrohe *hansgrohe-usa.com*
128A-B		S	Hanson Brick *hansonbrick.com*
cov4	*114*		Haworth *haworth.com*
252	*100*		Headwaters Resources *flyash.com*
60	*41*	S	Heat-N-Glo *heatnglo.com*
129	*54*		High Concrete Structures Inc *highconcrete.com*
188-189	*147*	S	Hunter Douglas Contract *hunterdouglas.com*
33	*148*	S	Hunter Douglas Contract *hunterdouglas.com*
194	*70*	S	illbruck *illbruck-archprod.com*
35	*20*		InPro Corporation *inprocorp.com*
54	*35*		International Code Council *iccsafe.org*
86	*52*	S	IR Security & Safety *irsecurityandsafety.com*
34	*118,19*		JJI Lighting Group *jjilightinggroup.com*
254	*102*		Joel Berman Glass Studios *jbermanglass.com*
46	*30*	S	Johns Manville *specjm.com*
79	*49*		Johnson Controls *johnsoncontrols.com*
73		S	Kawneer Company Inc *kawneer.com*
250	*98*		Kenyon *kenyonappliances.com*
65	*44*	S	Kim Lighting *kimlighting.com*
83	*50*	S	Knauf *knauffiberglass.com*
258	*107*		KraftMaid Cabinetry *kraftmaid.com*
256A	*115*	S	Lafarge North America *lafargenorthamerica.com*
4	*3*	S	landscapeforms *landscapeforms.com*
232	*86*		@Last Software *sketchup.com*
255	*104*	S	Laticrete International Inc *laticrete.com*
149	*56*		Lumec & Lumec Scheder *seegreatshapes1.com*
6-7	*5*		Lutron *lutron.com*
130	*55*		Lutron *lutron.com*
229	*83*	S	Major Industries *majorskylights.com*
175-179	*66*		Marble Institute of America Inc, The *marble-institute.com*
174	*65*		Marble Institute of America Inc, The *marble-institute.com*
169-173	*64*		Marvin Windows & Doors *marvin.com*
44-45	*29*		Marvin Windows & Doors *marvin.com*
55	*36*	S	MBCI *mbci.com*
168			McGraw-Hill Construction *construction.com*
265			McGraw-Hill Construction *construction.com*
252			McGraw-Hill Construction *construction.com*
256B			McGraw-Hill Construction *construction.com*
58	*38*	S	Metal Construction Associatio *metalconstruction.org*
2-3	*2*		Metal Initiative, The *themetalinitiative.com*
32	*18*		Modern Fan Co, The *modernfan.com*
128	*53*	S	Monier Lifetile *monierlifetile.com*
251	*99*	S	Mortar Net *mortarnet.com*
234			Móz Metal Laminates *mozdesigns.com*
230	*123*	S	MP Lighting *mplighting.com*
56	*37*	S	Nana Wall Systems Inc *nanawall.com*
262			National Building Museum *nbm.org*
256D	*117*		NJ SmartStart Buildings *njsmartstartbuildings.com*
248	*94*	S	Noble Company, The *noblecompany.com*
196	*72*		Norton Industries *nortonceilings.com*
8-9	*6*	S	Owens Corning *owenscorning.com*
243	*90*		Pella Windows & Doors *pella.com*
248	*93*	S	Pemko *pemko.com*
61	*42*	S	Petersen Aluminum *pac-clad.com*
256C	*116*	S	PGT Industries *pgtindustries.com*
151	*119*		Portland Cement Association *cement.org*
59	*39*		Prodema *prodema.com*
237	*131*	S	Professional Products Inc *professionalproducts.com*
38	*23*		Quilite *quilite.com*
53	*34*		Rocky Mountain Hardware *rockymountainhardware.c*
235	*88*		ROHL *rohlhome.com*
19	*11*		Samsung-Digital Information Div *samsungproav.com*
29	*16*		Schott Corporation *us.schott.com*
240	*89*	S	Sherwin-Williams *sherwin-williams.com*
193	*69*		Simplex Ceilings *simplexceilings.com*
233	*87*	S	Simpson Strong-Tie Company *simpsonstrongwall.com*
42	*27*		Skyline Design *skydesign.com*
15	*9*	S	Sloan Valve Company *sloanvalve.com*
48A-F	*120*		Steelcase *steelcase.com*
66	*45*		Steelscape *steelscape-inc.com*
62	*43*	S	Sto Corp *stocorp.com*
262	*111*		Stone River Bronze *stoneriverbronze.com*
161	*61*		Stratica *stratica.com*
70	*47*		Sunbrella brand fabrics *sunbrella.com*
249	*96*		Sustainable Forestry Initiative *aboutsfi.org*

For additional information on these advertisers, circle corresponding number on Reader Service Card, or go to archrecord.construction.com/products.
To reserve your 2005 Sweets call 1 800-442-2258

ADVERTISERS INDEX continued

263			Sweets sweets.construction.com
217	77		TAMKO Roofing Products tamarite.com
5	4	S	Technical Glass Products fireglass.com
27	15		Thermador thermador.com
253	101	S	Timely timelyframes.com
31	17		TOTO totousa.com
30			TOTO totousa.com
52	33		Unico System, The unicosystem.com
181-185	67	S	USG Corporation usg.com
230	85		Valli & Valli vallievalli.com
263	112		Verizon Wireless verizonwireless.com
278	113	S	VERSA-LOK versa-lok.com
220	79	S	Viking Range Corporation vikingrange.com
20	12		Vistawall Architectural Products vistawall.com
24	14	S	VT Industries vtindustries.com
84-85	51		Vulcraft, A Division of Nucor Corp nucor.com
152	58		Walker Zanger walkerzanger.com
22-23	13		Weather Shield Windows & Doors weathershield.com
12	8	S	Weyerhaeuser [Lyptus] weyerhaeuser.com/lyptus
162	62	S	Weyerhaeuser [Trus Joist] trusjoist.com

SALES OFFICES & CONTACTS

EXECUTIVE OFFICES

James H. McGraw, IV, Group Publisher
(212) 904-4048 Fax: (212) 904-3695
jay_mcgraw@mcgraw-hill.com

Laura Viscusi, VP, Associate Publisher
(212) 904-2518 Fax: (212) 904-2791
lviscusi@mcgraw-hill.com

Assistant: Pina Del Genio
(212) 904-6791 Fax: (212) 904-2791
pina_delgenio@mcgraw-hill.com

ONLINE SALES

Paul Cannella, Director
(312) 233-7499 Fax: (312) 233-7490
paul_cannella@mcgraw-hill.com

CLASSIFIED SALES

Diane Soister
(212) 904-2021 Fax: (212) 904-2074
diane_soister@mcgraw-hill.com

NORTHEAST / MID-ATLANTIC

Janet Kennedy (CT, MA, ME, NH, NJ, NY, PA, RI, VT)
(212) 904-3603 Fax: (212) 904-2791
janet_kennedy@mcgraw-hill.com

Joe Sosnowski (NJ, PA)
(610) 278-7829 Fax: (610) 278-0936
joseph_sosnowski@mcgraw-hill.com

MIDWEST

Mike Gilbert (AR, IL, IA, MN, MO, OH, W.PA, WV)
(312) 233-7401 Fax: (312) 233-7403
mike_gilbert@mcgraw-hill.com

Lisa Nelson (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 233-7402 Fax: (312) 233-7403
lisa_nelson@mcgraw-hill.com

SOUTHEAST / MID-ATLANTIC

Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com

WEST (AZ, CA, CO, NM, NV)

Bill Hague
(253) 858-7575 Fax: (253) 858-7576
(760) 340-5575 Fax: (760) 340-0439
bill_hague@mcgraw-hill.com

WEST (ID, MT, OR, S.CA, UT, WA, WY)

Bill Madden
(503) 224-3799 Fax: (503) 224-3899
bill_madden@mcgraw-hill.com

INTERNATIONAL

Glen Wither (Canada)
(888) 836-6623 Fax: (866) 212-2213
glen_wither@mcgraw-hill.com

Martin Drueke (Germany)
(49) 202-27169-12 Fax: (49) 202-27169-20
drueke@intermediapartners.de

Ferruccio Silvera (Italy)
(39) 022-846716 Fax: (39) 022-893849
ferruccio@silvera.it

Katsuhiro Ishii (Japan)
(03) 5691-3335 Fax: (03) 5691-3336
amskatsu@dream.com

Young-Seoh Chin (Korea)
(822) 481-3411/3 Fax: (822) 481-3414

PRODUCT NEWS SPOTLIGHTS / POSTCARD SERVICE

Deidre Allen
(212) 904-2010 Fax: (609) 426-7136
deidre_allen@mcgraw-hill.com

SUBSCRIBER SERVICE

(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64cs@mcgraw-hill.com

BACK ISSUES

(212) 904-4635
phyllis_moody@mcgraw-hill.com

REPRINT MANAGEMENT SERVICES

(800) 360-5549 x129
architecturalrecord@reprintbuyer.com

What are Architects earning?

What are firms paying?

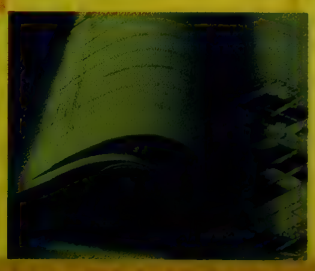




FIND THE ANSWERS in the new **AIA Compensation Report**—the most comprehensive source of compensation information in the architecture industry. No other survey covers such a wide range of positions and geographic scope. You'll find up-to-date information on compensation levels and benefits for over 35 positions inside architecture firms.

The survey is available in print or electronic PDF. In PDF, you can also buy any of the regional tables, which include states and metro data for each region.

AVAILABLE JULY 2005



AIA

2005 AIA Compensation Report: A Survey of U.S. Architecture Firms

For information, please visit **www.aia.org/econ_reports.**

AIA BOOKSTORE | 1735 NEW YORK AVENUE, NW | WASHINGTON, DC 20006

FREESTANDING WALLS

TWO IDENTICAL FACES, ONE UNIQUE ADVANTAGE.

WHEN IT COMES TO FREESTANDING WALLS, TWO-FACED IS A GOOD THING. With VERSA-LOK Standard, creating beautiful freestanding walls that look great from both sides is a snap. Solid characteristics and our splitting grooves make field modifications easy and consistent. Because the same product is used for freestanding and retaining walls, VERSA-LOK provides a seamless transition between all design elements for a unified, harmonious look. One more advantage to add to the long list of features that make VERSA-LOK construction- and design-friendly.



VERSA-LOK is the industry's only solid, top-pinning system.

TWO PRODUCTS, ENDLESS POSSIBILITIES. In addition to the incredibly versatile Standard product, VERSA-LOK also makes Mosaic®, the hardest-working random-pattern product in the industry. Our simple, three-unit system not only enables you to build strong and beautiful walls, it handily accommodates soil reinforcement for random-pattern walls of any height. It all boils down to this: You can do more, and do it easily – with VERSA-LOK.

Mosaic's random pattern creates visual appeal.

CREATE YOUR OWN MARVELS. For more information and everything you need to start creating modern landscaping marvels, call 800-770-4525 or visit www.versa-lok.com.



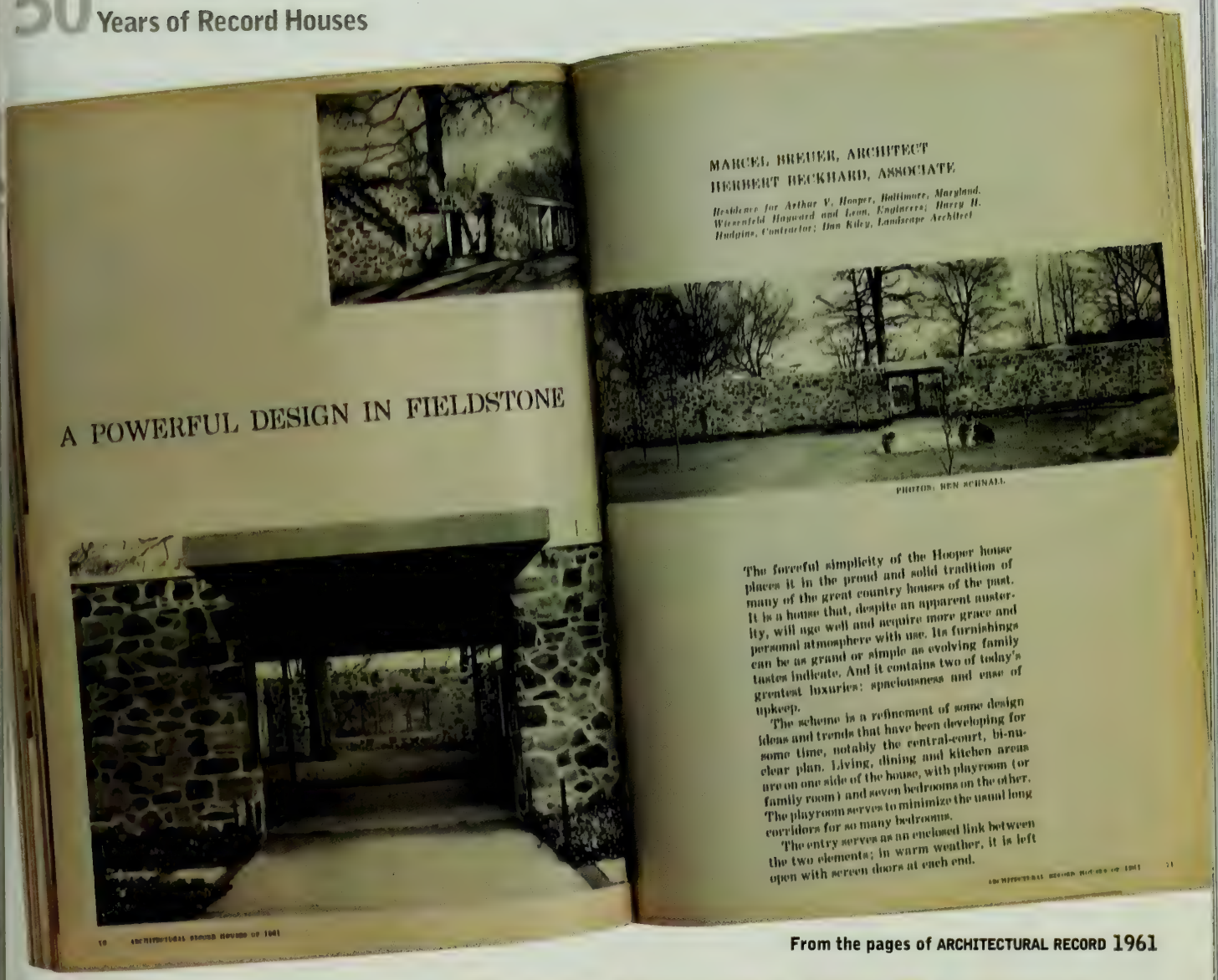
Private Residence, Chisago Township, Minnesota, in VERSA-LOK Weathered Standard

VERSA-LOK®
Retaining Wall Systems
Solid Solutions.™

Oakdale, Minnesota
800-770-4525 • www.versa-lok.com

© 2004 Kiltie Corporation

CIRCLE 113 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



A POWERFUL DESIGN IN FIELDSTONE

MARCEL BREUER, ARCHITECT
HERBERT BECKHARD, ASSOCIATE

Residence for Arthur V. Hooper, Baltimore, Maryland. Wiesenfeld Hayward and Lenn, Engineers; Harry H. Hudgins, Contractor; Dan Kiley, Landscape Architect

PHOTOS: BEN SCHNALL

The forceful simplicity of the Hooper house places it in the proud and solid tradition of many of the great country houses of the past. It is a house that, despite an apparent austerity, will age well and acquire more grace and personal atmosphere with use. Its furnishings can be as grand or simple as evolving family tastes indicate. And it contains two of today's greatest luxuries: spaciousness and ease of upkeep.

The scheme is a refinement of some design ideas and trends that have been developing for some time, notably the central-court, bi-nuclear plan. Living, dining and kitchen areas are on one side of the house, with playroom (or family room) and seven bedrooms on the other. The playroom serves to minimize the usual long corridors for so many bedrooms.

The entry serves as an enclosed link between the two elements; in warm weather, it is left open with screen doors at each end.

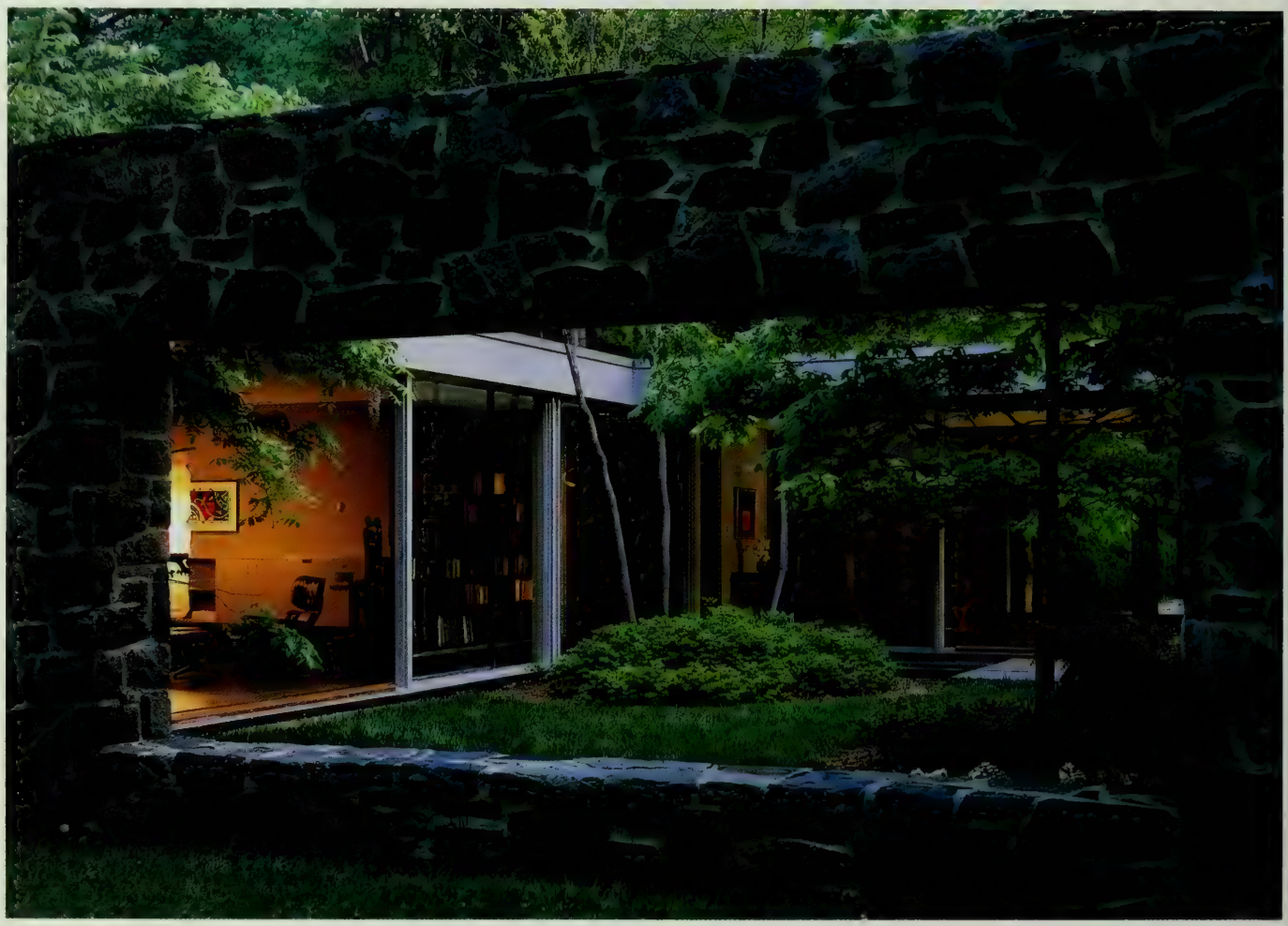
From the pages of ARCHITECTURAL RECORD 1961

Going Beyond the Bauhaus

By Suzanne Stephens



The houses that Marcel Breuer designed in the several decades after he arrived in the United States in 1937 stand out as masterful examples of the stringent principles of the Bauhaus, where he was both a student and teacher. Once in America, Breuer began to demarcate Bauhaus-style open plans and taut planes with local, natural materials, as seen by a house in Baltimore, Maryland, built in 1959–60 for Arthur Hooper, a lawyer, and his wife, Edith, a patron of the arts. With his associate Herbert Beckard, Breuer created a spectacularly long, low house of Maryland fieldstone, in a wooded sanctuary at the city's edge. The rectilinear, 5,000-square-foot house features a central, square courtyard that separates public (living, dining, kitchen) areas from private spaces (a cluster of six bedrooms and a family room). In this mostly one-level structure, stone walls and lally columns support the steel beams and wood joists of the flat roof, while the floors are concrete. Breuer took advantage of the grade change to tuck in a lower level for stables for the Hoopers' horses, a caretakers' apartment, and a garage. "I loved growing up in the house," says a daughter, Queene Hooper







This page: An opening in the rear wall of the courtyard, directly on axis with the entrance path, frames a view of the woods (top). Stone walls alternate with glass to partition spaces (above and right).

Previous page: At the rear of the house, glazed walls embrace the view.

(continued from previous page) Foster. "It was like being in a country club, with quick and easy access to the outdoors, and to the stables downstairs."

The house was put on the market in 1995, after Edith Hooper, by then a widow, passed away. But first, Queene's husband, Jonathan S. Foster, a New York architect, renovated it. Foster found the fieldstone walls to be in peak condition owing to the fact that Breuer had brought Italian masons to Baltimore to the erect them. Nevertheless, Foster needed to rebuild single-pane sliding glass doors. He also replaced the discolored acoustical-tile ceilings with white Sheetrock and substituted carpeting for vinyl-tile flooring in areas not surfaced in blue-stone. Fortunately, a buyer showed up in 1996 who was sympathetic to the architecture. Dr. Richard North, a neurosurgeon whose father, William North, was an architect in New York, explains, "I was attracted to the way the house brought in the outdoors with floor-to-ceiling glass, and framed the views of the lake." He made only a few adjustments to update the house for his family's needs—such as converting the stables into a garage, installing air-conditioning, and drilling holes in the concrete slab floor for cable and Internet access.

Even though Edith Hooper's art collection (with works by Calder, Noguchi, Klee, Johns, and de Kooning) had been given to museums and the furniture dispersed, a lot of Breuer built-in cabinets and shelves remained. North searched for furniture with a '50s Modern design look, along with art that goes with that period. "We wanted a place where Mrs. Hooper would feel at home if she were to walk back in," he says. ■

Work without boundaries.
Create without boundaries.





Dell recommends Microsoft® Windows® XP Professional

e® Video Collection Standard
documentation or
g may vary from retail version

Goodbye to creative constraints. Dell™ and Adobe® have joined forces to help provide solutions for your creative needs. Dell Precision™ workstations feature the latest processors, loads of memory, and PCI Express™ x16 2-D and 3-D graphics cards, making them powerful enough to handle large graphics files quickly and deliver stunning visual s. Best of all, Adobe has a range of Dell ISV-certified software options, including the comprehensive Adobe® Video Collection 2.5 Standard. Simple solutions, so all you have is be creative.

Limited time offers.

DELL PRECISION™ 470 WORKSTATION

Scalable, Dual Processor Capable Workstation
- Intel® Xeon™ Processor (2.80GHz, 1MB Cache, 800MHz FSB)
- Microsoft® Windows® XP Professional
- 1GB Dual-Channel DDR2 SDRAM
- 160GB* (7200 RPM) SATA Hard Drive
- 128MB ATI FireGL™ V3100 PCI Express™ x16 Graphics Card
- 48x CD Burner/DVD Combo Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* On-Site Service,* Tech Support)
- Monitor Not Included

$1699 Lease as low as **$45**/mo. (48 pmts*)
E-VALUE Code: 04751-S40716m

Recommended Upgrades:
- 3-Yr Business Essential Service Plan (includes 24x7 Same-Day On-Site Service,* advanced Tech Support), add $408
- Dell™ UltraSharp™ 1905FP 19" Flat Panel Display, add $499

DELL PRECISION™ M20 WORKSTATION

Workstation Performance, Notebook Mobility
- Featuring Intel® Centrino™ Mobile Technology with Intel® Pentium® M Processor 730 (1.60GHz, 2MB L2 Cache, 533MHz FSB); Intel® PRO/Wireless Card
- Microsoft® Windows® XP Professional
- 14.1" SXGA+ Active Matrix Display
- 512MB DDR2 SDRAM
- 60GB* (7200 RPM) Hard Drive
- ATI Mobility™ FireGL™ V3100 64MB PCI Express™ OpenGL Graphics
- 8x DVD-ROM Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* Tech Support)

$1999 Lease as low as **$53**/mo. (48 pmts*)
E-VALUE Code: 04751-S40719m

Recommended Upgrades:
- 80GB* (5400 RPM) Hard Drive, add $30
- 3-Yr Business Standard Service Plan (includes On-Site Service,* CompleteCare™ Accidental Damage Service,* advanced Tech Support), add $278

Dell recommends Adobe® software with Dell Precision™ workstations.

Adobe® Video Collection 2.5 Standard

- Package includes Adobe Premiere® Pro 1.5, Adobe After Effects® 6.5 Standard, Adobe Audition™ 1.5, and Adobe Encore™ DVD 1.5.

Special offer only with purchase of select Dell Precision™ Workstations*
Only **$599** Great Value!

[redacted]
Operate with powerful, next-generation digital imaging features that are the professional standard for graphic and web designers, photographers, and video professionals.
$589 SKU A0472798

[redacted]
Add stunning 2D and 3D compositing, animation, and visual effects as well as motion tracking and stabilization to production.
Standard Version
$728 SKU A0369456

[redacted]
Revolutionizes non-linear video editing with real-time tools that provide precise management of virtually every aspect of video and audio editing.
$729 SKU A0356041

FREE 3-5 Day Shipping* with purchase of select business systems. For a limited time only. Call or go online for eligible systems.

Get more out of creativity. Get more out of now. DELL

obe

CALL 888.691.8169 toll free **CLICK www.dell.com/SMB/PrecisionHD**

1-F 7a-8p Sat 8a-5p, CT

ng/Availability: Pricing, specifications, availability, and terms of offer may change without notice. Taxes, fees and shipping and handling charges, except for free shipping offer, are extra, vary, and not subject to discount. Offers may be combined with other select offers unts. U.S. Dell Small Business new purchases only. LIMIT 5 DISCOUNTED OR PROMOTIONAL ITEMS PER CUSTOMER. In case of customers leasing under these promotions, please note that items leased will be subject to applicable end-of-lease options or requirements. not be responsible for pricing or other errors, and reserves the right to cancel orders arising from such errors. **Workstation Offer:** Excludes n series. **Warranty:** For a copy of our Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One [redacted] Rock, Texas 78682. For more information, visit http://www.dell.com/warranty. **On-Site Service:** Service may be provided by third-party. Technician will be dispatched, if necessary, following phone-based troubleshooting. Subject to parts [redacted] ions and terms of service contract. Service timing dependent upon time of day call placed to Dell. **Leasing:** Monthly payment based on 48-month Fair Market Value ("FMV") QuickLease and does not include taxes, fees and shipping and handling charges. [redacted] nt may vary, depending on your creditworthiness. QuickLease arranged by Dell Financial Services L.P. ("DFS"), an independent entity, to qualified Small Business customers. Minimum transaction size of $500 required. At the end of the FMV [redacted] pment for the then FMV, renew the lease or return the equipment to DFS. Please contact your DFS representative for further details. All terms subject to credit approval and availability, and are subject to change without notice. **CompleteCare Accidental Damage e:** CompleteCare service excludes theft, loss, and damage due to fire or intentional damage. CompleteCare not available in all states. Customer may be required to return unit to Dell. For complete details, visit www.dell.com/servicecontracts. **Hard Drive** GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment and will be less. **Free 3-5 Day Shipping:** Free shipping is lowest cost (3-5 day) shipping. Valid for U.S. Small Business new purchases only [redacted] Alaska) U.S. only. To qualify for free shipping, minimum purchase thresholds may apply. Call or go online for details. Systems free shipping offers exclude Software and Peripheral (S&P) orders under $59; all S&P orders placed by phone [redacted] s configurator pages. S&P free shipping offers apply to S&P orders purchased in the S&P Online store and/or by phone. Free shipping on S&P does not apply to S&P in the online system configuration pages, but can be combined with other offers. **Trademark/Copyright s:** Dell, the stylized E logo, E-Value, UltraSharp, CompleteCare and Dell Precision are trademarks of Dell Inc. Intel, Intel Centrino, Intel Xeon and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United State [redacted] es. Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Adobe, the Adobe Logo and Acrobat are either registered trademarks or trademarks of Adobe Systems Incorporated in the United and/or other countries. ©2005 Dell Inc. All rights reserved.



HAWORTH®
change by design

www.haworth.com 866.833.4343

CIRCLE 114 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

c tectural Record
05 August

3 9042 06437413 2

TECTURAL RECORD



BIG ENOUGH FOR MILAN?

FUKSAS DESIGNS A MILE-LONG EXHIBITION HALL

ALSO

BIG AND BIGGER IN PARIS, GATESHEAD, AND LEIPZIG

SPECIAL SECTION LIGHTING

BURLINGAME
AUG 3 0 2005
LIBRARY

[Between us, ideas become reality.™]



Infusions™ accent canopies can add a playful personality to any interior space. Mix and match colors and textures to create your own custom configurations. Installation is as easy as child's play – so use as many as it takes. After all, the more the merrier.

1-877-ARMSTRONG

armstrong.com/infusions



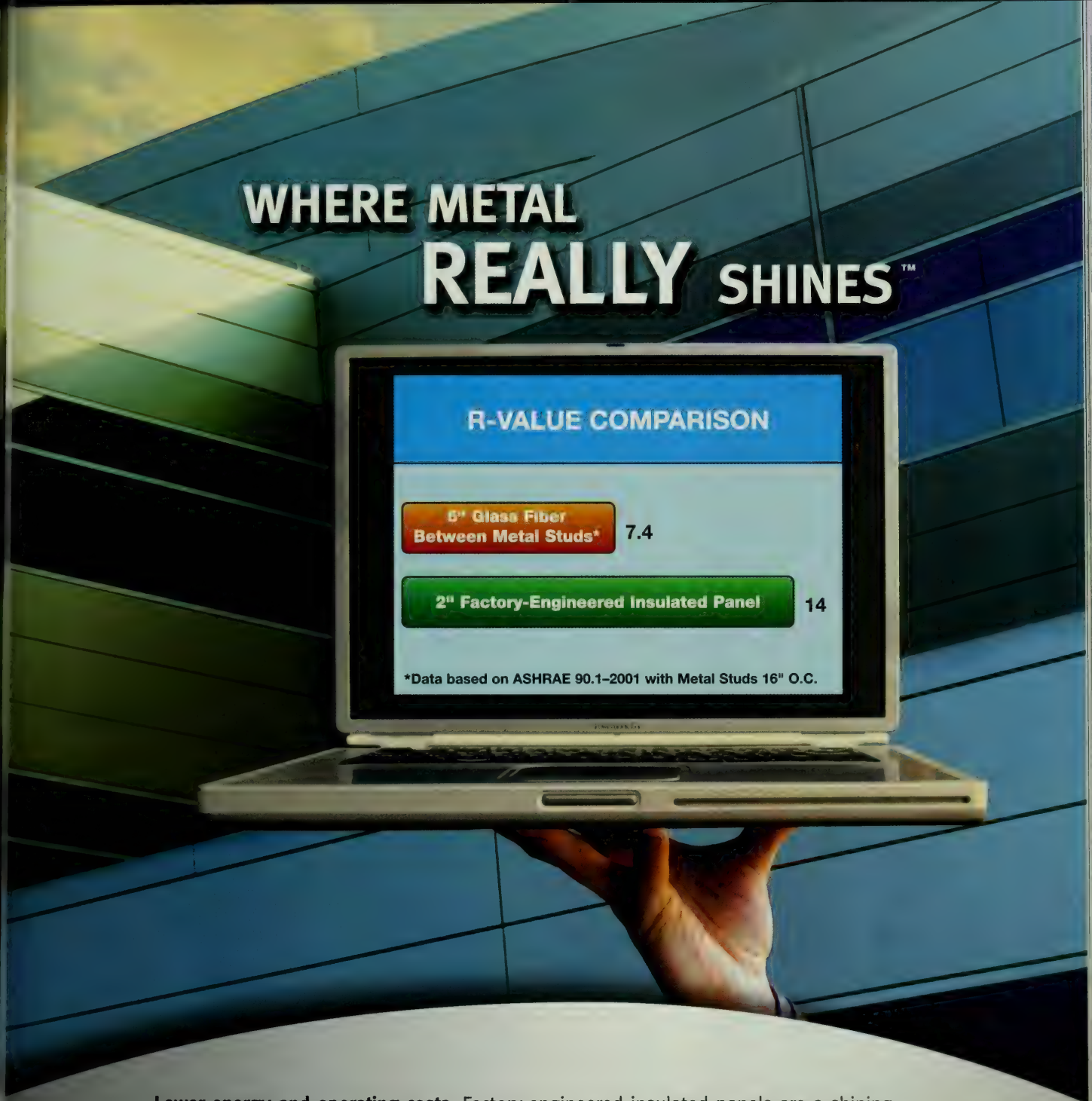
Armstrong

CIRCLE 1 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Union Switch Building, Pittsburgh, PA
Architect: Design Alliance
Product: Factory-engineered insulated panels



THE METAL INITIATIVE™



Lower energy and operating costs. Factory-engineered insulated panels are a shining example of continuous design innovation—with new surface textures, colors, profiles and protective coatings technologies. Today, they're as highly regarded for their dramatic appearance and durability as they are for their energy-saving properties.

They have the highest insulation value per inch of all wall insulating products, so you can build expressive architecture with long-term durability, 100% recyclability and a lifetime of very low energy costs.

Learn more about factory-engineered insulated panels at our web site. There's information on metal's architectural advantages, green design, case histories, photos, news, related links and more. See where metal really shines at: **www.themetalinitiative.com**

CIRCLE 2 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The KUSSER Fountain System

Fountains
Pools
Interactive Features
Water Tables
Waterfalls

Waterwalls
... at its Best

KUSSER FountainWorks
Full service design, production
Solid or Clad stone finishes
Finest equipment, specifications
25 years experience
www.KusserUSA.com
800-919-0080

CIRCLE 3 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL RECORD

EDITOR IN CHIEF	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
MANAGING EDITOR	Beth Broome, *elisabeth_broome@mcgraw-hill.com*
DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
DEPUTY EDITORS	Clifford A. Pearson, *pearsonc@mcgraw-hill.com*
	Suzanne Stephens, *suzanne_stephens@mcgraw-hill.com*
	Charles Linn, FAIA, Profession and Industry, *linnc@mcgraw-hill.com*
SENIOR EDITORS	Sarah Amelar, *sarah_amelar@mcgraw-hill.com*
	Sara Hart, *sara_hart@mcgraw-hill.com*
	Deborah Snoonian, P.E., *deborah_snoonian@mcgraw-hill.com*
	William Weathersby, Jr., *bill_weathersby@mcgraw-hill.com*
	Jane F. Kolleeny, *jane_kolleeny@mcgraw-hill.com*
PRODUCTS EDITOR	Rita Catinella Orrell, *rita_catinella@mcgraw-hill.com*
NEWS EDITOR	Sam Lubell, *sam_lubell@mcgraw-hill.com*
DEPUTY ART DIRECTOR	Kristofer E. Rabasca, *kris_rabasca@mcgraw-hill.com*
ASSOCIATE ART DIRECTOR	Clara Huang, *clara_huang@mcgraw-hill.com*
PRODUCTION MANAGER	Juan Ramos, *juan_ramos@mcgraw-hill.com*
WEB EDITOR	Randi Greenberg, *randi_greenberg@mcgraw-hill.com*
WEB DESIGN	Susannah Shepherd, *susannah_shepherd@mcgraw-hill.com*
WEB PRODUCTION	Laurie Meisel, *laurie_meisel@mcgraw-hill.com*
EDITORIAL SUPPORT	Linda Ransey, *linda_ransey@mcgraw-hill.com*
	Monique Miller, *monique_miller@mcgraw-hill.com*
COPY EDITOR	Leslie Yudell
ILLUSTRATOR	I-ni Chen
EDITORIAL ASSISTANTS	Gregory Hafkin, Amanda Webb
EDITOR AT LARGE	James S. Russell, AIA, *jamesrussell_editor@earthlink.net*
CONTRIBUTING EDITORS	Raul Barreneche, Robert Campbell, FAIA, Andrea Oppenheimer Dean, David Dillon, Lisa Findley, Blair Kamin, Nancy Levinson, Thomas Mellins, Robert Murray, Sheri Olson, FAIA, Nancy B. Solomon, AIA, Michael Sorkin, Michael Speaks, Ingrid Spencer
SPECIAL INTERNATIONAL CORRESPONDENT	Naomi R. Pollock, AIA
INTERNATIONAL CORRESPONDENTS	David Cohn, Claire Downey, Tracy Metz
GROUP PUBLISHER	James H. McGraw IV, *jay_mcgraw@mcgraw-hill.com*
VP, ASSOCIATE PUBLISHER	Laura Viscusi, *laura_viscusi@mcgraw-hill.com*
VP, MARKETING AND BUSINESS DEVELOPMENT	David Johnson, *dave_johnson@mcgraw-hill.com*
VP, GROUP EDITORIAL DIRECTOR	Robert Ivy, FAIA, *rivy@mcgraw-hill.com*
GROUP DESIGN DIRECTOR	Anna Egger-Schlesinger, *schlesin@mcgraw-hill.com*
DIRECTOR, CIRCULATION	Maurice Persiani, *maurice_persiani@mcgraw-hill.com*
	Brian McGann, *brian_mcgann@mcgraw-hill.com*
DIRECTOR, MARKETING COMMUNICATION	Chris Meyer, *chris_meyer@mcgraw-hill.com*
DIRECTOR, MULTIMEDIA DESIGN & PRODUCTION	Susan Valentini, *susan_valentini@mcgraw-hill.com*
MANAGER, ADVERTISING PRODUCTION	Stephen R. Weiss, *stephen_weiss@mcgraw-hill.com*
DIRECTOR, FINANCE	Ike Chong, *ike_chong@mcgraw-hill.com*
DIRECTOR, SPECIAL PROJECTS	Charles Pinyan, *cpinyan@mcgraw-hill.com*
REPRINTS	Reprint Management Services, *architecturalrecord@reprintbuyer.com*

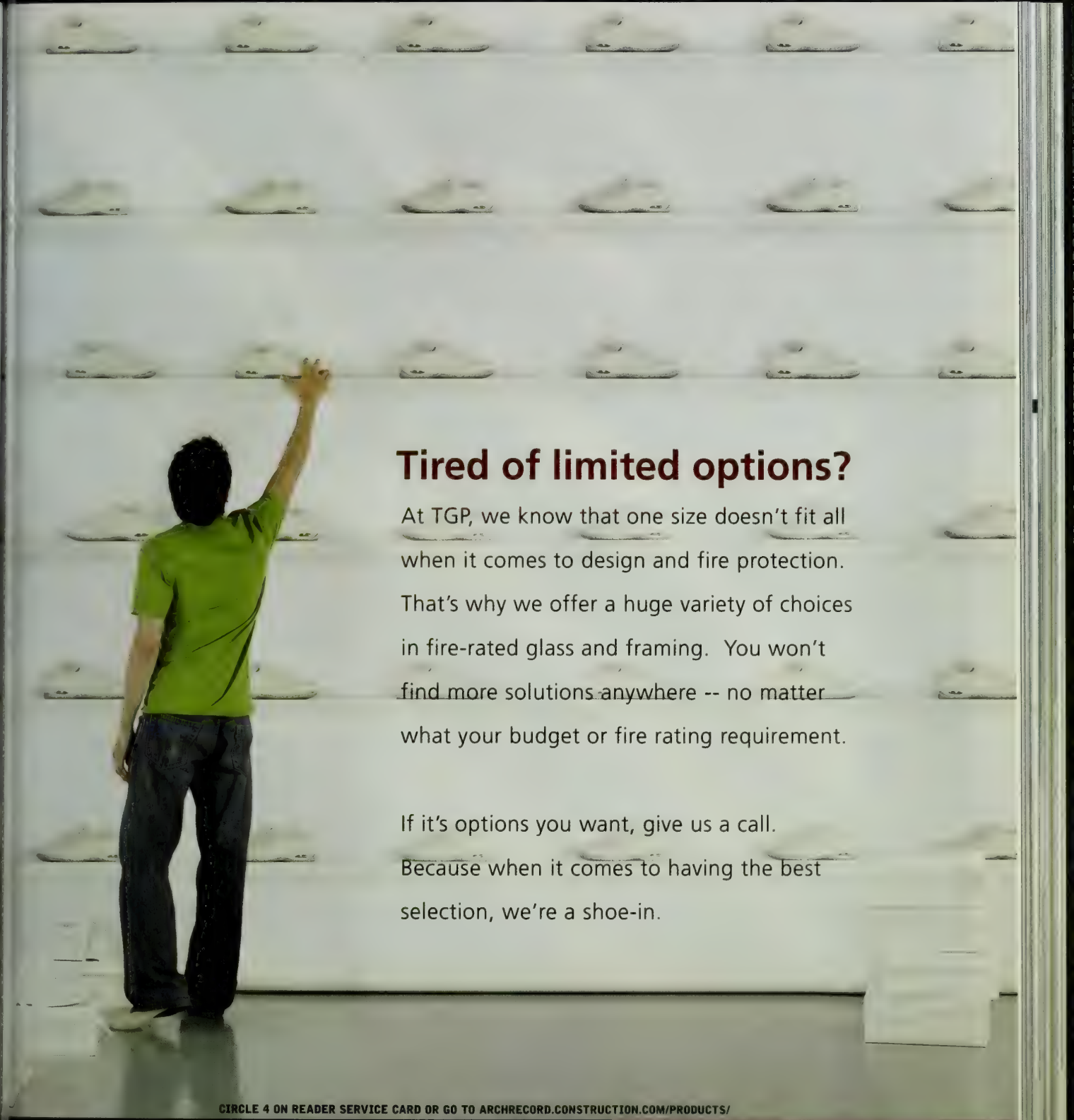
EDITORIAL OFFICES: 212/904-2594. Editorial fax: 212/904-4256. E-mail: *rivy@mcgraw-hill.com.* Two Penn Plaza, New York, N.Y. 10121-2298. **WEB SITE:** www.archrecord.com. **SUBSCRIBER SERVICE:** 877/876-8093 (U.S. only). 609/426-7046 (outside the U.S.). Subscriber fax: 609/426-7087. E-mail: *p64ords@mcgraw-hill.com.* AIA members must contact the AIA for address changes on their subscriptions. 800/242-3837. E-mail: *members@aia.org.* **INQUIRIES AND SUBMISSIONS:** Letters, Robert Ivy; Practice, Charles Linn; Books, Deborah Snoonian; Record Houses and Interiors, Sarah Amelar; Products, Rita Catinella Orrell; Lighting and Interiors, William Weathersby, Jr.; Residential, Jane F. Kolleeny; Web Editorial, Randi Greenberg.

ARCHITECTURAL RECORD: (ISSN 0003-858X) August 2005. Vol. 193, No. 08. Published monthly by The McGraw-Hill Companies, 1221 Avenue of the Americas, New York, N.Y. 10020. Periodicals postage paid at New York, N.Y. and additional mailing offices. Canada Post International Publications Mail Product Sales Agreement No. 40012501. Return undeliverable Canadian addresses to: DPGM Ltd., 2-7496 Bath Road, Mississauga, ON L4T 1L2. Email: P64ords@mcgraw-hill.com. Registered for GST as The McGraw-Hill Companies. GST No. R123075673. ***Postmaster:*** *Please send address changes to* ARCHITECTURAL RECORD, Fulfillment Manager, P.O. Box 566, Hightstown, N.J. 08520. **SUBSCRIPTION:** Rates are as follows: U.S. and Possessions $64; Canada and Mexico $79 (payment in U.S. currency, GST included); outside North America $199 (air freight delivery). Single copy price $9.95; for foreign $11. Subscriber Services: 877/876-8093 (U.S. only); 609/426-7046 (outside the U.S.); fax: 609/426-7087. **SUBMISSIONS:** Every effort will be made to return material submitted for possible publication (if accompanied by stamped, self-addressed envelope), but the editors and the corporation will not be responsible for loss or damage. **SUBSCRIPTION LIST USAGE:** Advertisers may use our list to mail information to readers. To be excluded from such mailings, send a request to ARCHITECTURAL RECORD, Mailing List Manager, P.O. Box 555, Hightstown, N.J. 08520. **OFFICERS OF THE MCGRAW-HILL COMPANIES:** *Chairman, President and Chief Executive Officer:* Harold McGraw III. *Executive Vice President and Chief Financial Officer:* Robert J. Bahash. *Executive Vice President, Human Resources:* David L. Murphy. *Senior Vice President and General Counsel:* Kenneth M. Vittor. *Senior Vice President, Corporate Affairs, and Assistant to the President and CEO:* Glenn S. Goldberg. *Principal Operating Executives:* Kathleen A Corbet, *President, Standard & Poors;* Henry Hirschberg, *President, McGraw-Hill Education;* Scott C. Marden, *President, McGraw-Hill Information and Media Services.* **MCGRAW-HILL CONSTRUCTION:** Norbert W. Young, Jr., FAIA, *President. Vice President and CFO:* Louis J. Finocchiaro. **COPYRIGHT AND REPRINTING:** Title ® reg. in U.S. Patent Office. Copyright © 2005 by The McGraw-Hill Companies. All rights reserved. Where necessary, permission is granted by the copyright owner for libraries and others registered with the Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, Mass. 01923. To photocopy any article herein for personal or internal reference use only for the base fee of $1.80 per copy of the article plus ten cents per page, send payment to CCC, ISSN 0003-858X. Copying for other than personal use or internal reference is prohibited without prior written permission. Write or fax requests (no telephone requests) to Copyright Permission Desk, ARCHITECTURAL RECORD, Two Penn Plaza, New York, N.Y. 10121-2298; fax 212/904-4256. For reprints call 800/360-5549 X 129 or e-mail architecturalrecord@reprintbuyer.com. Information has been obtained by The McGraw-Hill Companies from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, The McGraw-Hill Companies or ARCHITECTURAL RECORD does not guarantee the accuracy, adequacy, or completeness of any information and is not responsible for any errors or omissions therein or for the results to be obtained from the use of such information or for any damages resulting there from.

McGraw-Hill CONSTRUCTION ABC MPA The McGraw-Hill Companies

THE AMERICAN INSTITUTE OF ARCHITECTS 2005 BOARD OF DIRECTORS • OFFICERS: Douglas L Steidl, FAIA, MRAIC, President; Kate Schwennsen, FAIA, First Vice President; Shannon Kraus, AIA, Vice President; Thomas R. Mathison, FAIA, Vice President; RK Stewart, FAIA, Vice President; John C. Senhauser, FAIA, Secretary; James A. Gatsch, FAIA, Treasurer; Ana Guerra, Associate AIA, Associate Representative to the AIA Executive Committee; Saundra Stevens, Hon. AIA, CACE Representative to the AIA Executive Committee; Norman L. Koonce, FAIA, Executive Vice President/CEO. • **REGIONAL DIRECTORS:** Peter J. Arsenault, AIA, NCARB, LEED AP; Douglas E. Ashe, AIA; Michel C. Ashe, AIA; Ronald J. Battaglia, FAIA; William D. Beyer, FAIA; Michael Broshar, AIA; David J. Brotman, FAIA; Randy Byers, AIA; Tommy Neal Cowan, FAIA; Jacob Day; Jeremy Edmunds, Associate AIA, LEED AP; Glenn H. Fellows, AIA; Robert D. Fincham, AIA; Jonathan L. Fischel, AIA; Marion L. Fowlkes, FAIA; Saul Gonzalez; The Hon. Jeremy Harris, Hon. AIA; John J. Hoffmann, FAIA; William E. Holloway, AIA; Clark Llewellyn, AIA; Marvin J. Malecha, FAIA; Clark D. Manus, FAIA; Linda McCracken-Hunt, AIA; Carl F. Meyer, FAIA; George H. Miller, FAIA; Elizabeth E. Mitchell; Hal P. Munger, AIA; Robin L. Murray, AIA, PP; Celeste A. Novak, AIA, LEED AP; Gordon N. Park, CDS, AIA; David R. Proffitt, AIA; Marshall E. Purnell, FAIA; Miguel A. Rodriguez, AIA; Jerry K. Roller, AIA, NCARB; Jeffrey Rosenblum, AIA; Robert I. Selby, FAIA; Norman Strong, FAIA; Leslie J. Thomas, AIA; J. Benjamin Vargas, AIA; Bryce A. Weigand, FAIA. • **AIA MANAGEMENT COUNCIL:** Norman L. Koonce, FAIA, Executive Vice President/CEO; James Dinegar, CAE, Chief Operating Officer; Richard J. James, CPA, Chief Financial Officer; Jay A. Stephens, Esq., General Counsel; Helene Combs Dreiling, FAIA, Team Vice President, AIA Community; Ronald A. Faucheux, PhD, Esq., Team Vice President, AIA Government Advocacy; Barbara Sido, CAE, Team Vice President, AIA Knowledge; Elizabeth Stewart, Esq., Team Vice President, AIA Public Advocacy; David Downey, CAE, Assoc. AIA, Managing Director, AIA Communities by Design; Suzanne Harness, AIA, Esq., Managing Director and Counsel, AIA Contract Documents; Richard L. Hayes, Ph.D., RAIC, AIA, CAE, Managing Director, AIA Knowledge Resources; Brenda Henderson, Hon. AIA, Managing Director, AIA Component Relations; Christine M. Klein, Managing Director, AIA Meetings; Carol Madden, Managing Director, AIA Membership Services; Philip D. O'Neil, Managing Director, AIA Technology; C.D. Pangallo, EdD, Managing Director, AIA Continuing Education; Terence J. Poltrack, Managing Director, AIA Communications; Phil Simon, Managing Director, AIA Marketing and Promotion; Laura Viehmyer, SPHR, CEBS, CAE, Chief Human Resources Officer.

PRINTED IN USA



Tired of limited options?

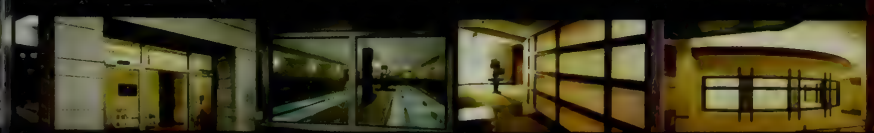
At TGP, we know that one size doesn't fit all when it comes to design and fire protection. That's why we offer a huge variety of choices in fire-rated glass and framing. You won't find more solutions anywhere -- no matter what your budget or fire rating requirement.

If it's options you want, give us a call. Because when it comes to having the best selection, we're a shoe-in.

CIRCLE 4 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

TGP
hnical Glass Products

Your source for fire-rated glass & framing.



1.888.397.FIRE (3473)

FIREGLASS.COM



© Weather Shield Mfg., Inc.

Freedom of **EXPRESSION** comes in many shapes and sizes.

Proudly offered: Custom shapes and sizes from Weather Shield give you the freedom to create practically any window or door. Simulated Divided Lite (SDL) stars shown here in maple and True Divided Lite (TDL) stripes in cherry and mahogany from Weather Shield's Custom Wood Interiors Collection®. Blue, red, dark red and opaque white glass from Vanceva™ by Solutia®. For complete custom capabilities call **1-800-477-6808** or visit **weathershield.com/AR**



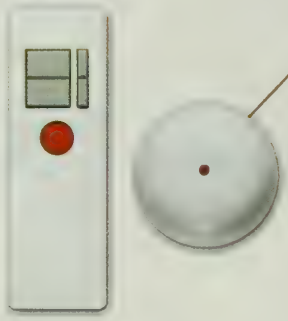
Demand better. Compromise nothing. **Want More**™

Weather Shield® Premium Windows and Doors

CIRCLE 5 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

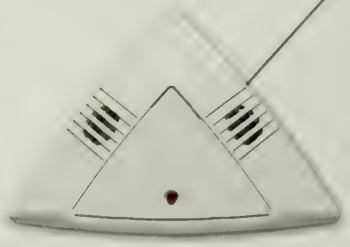
Light is everything.

Light affects people.
When the light is right, students learn more, employees are more productive, there are fewer health complaints and occupant comfort is increased.



IR hand-held remotes and receivers for personal control

Light is expensive.
Despite the fact that most lighting is energy-efficient, fluorescent lighting is still the primary source of energy consumption in most buildings.



Occupant sensors for energy management

Scalable from 1 to 32,000 fixtures

Light is daylight and electric light.
Both sources should be in harmony to keep people comfortable and productive, address building energy usage, and promote green design.



Photocells for daylight harvesting

Introducing EcoSystem™

Dimming ballasts for
fluorescent lighting

LIGHTFAIR INTERNATIONAL

2005 winner best of category
Award for Ballasts and Transformers



EcoSystem™
Light control that is simple and cost-effective.

Using the same basic components, build a system for a single lighting fixture in a single room, or for thousands of fixtures throughout an entire building.

Sensors and wallstations connect directly to any ballast — without interfaces or powerpacks — and share information with other ballasts throughout the system.

Over the life of the building, change or repurpose the space easily without costly rewiring.

Experience EcoSystem for yourself.
Call Lutron at **1.877.258.8766 ext 244**, or visit **www.lutron.com/ecosystem**.

LUTRON
Lutron controls your light...

CIRCLE 6 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/


BE
A

Adobe Acrobat 7.0



Teamwork just got easier. Combine multiple file types into a single, searchable document. Share critical information more securely. View and respond to project feedback seamlessly. And get everyone on the same page. Acrobat 7.0. Try it for free at adobe.com/collaborate and see how much more your team can do. Better by Adobe.

Adobe

CIRCLE 7 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Never Follow audiusa.com



You may need to build a Bauhaus garage.

The Audi A6, 2005's World Car of the Year, demonstrates the ideal unity between art and technology. With available quattro® all-wheel drive, advanced FSI® engine technology and an engaging interior, the A6 is at the pinnacle of its class. It's greater to lead than follow.

Audi

"Audi," "Never Follow," "A6," "quattro," "FSI" and the four rings emblem are registered trademarks of AUDI AG. ©2008 Audi of America, Inc.
World Car of the Year information available at www.wcoty.com.

ARCHITECTURAL RECORD

08.2005



On the Cover: *Milan Trade Fair, by Studio Fuksas. Photograph by Giuseppe Blengini/Studio Fuksas*
Right: *The Sage Gateshead, by Foster and Partners. Photograph by Richard Bryant/ARCAID*

News

23 Redesigned Freedom Tower will be sleeker, safer*
28 London begins plans for 2012 Olympics*

Departments

17 Editorial: Three Little Letters*
19 Letters*
47 Archrecord2: For the emerging architect *by Randi Greenberg**
51 Critique: A home for political football *by Michael Sorkin*
55 Snapshot: The Craigieburn Bypass *by Beth Broome*
209 Dates & Events*
231 Record House of the Month *by James S. Russell, AIA**

Features

60 Saving the Early Modernist Cottages of Cape Cod
by Mildred F. Schmertz, FAIA
Preservationists strive to save an enclave of Modernist homes.

68 Is There Hope for the Big Box? *by Sam Lubell*
Retailers are beginning to up the design ante for behemoth stores.

Projects

89 Introduction *by Suzanne Stephens**

82 Central Building, BMW Plant, *Germany* *by Raul A. Barreneche**
Zaha Hadid Architects
A building harnesses motion and brings people and cars together.

92 Milan Trade Fair, *Italy* *by Paul Bennett**
Studio Fuksas
Steel and glass drape a convention center for trade and fashion.

100 Renault Square Com, *France* *by Philip Jodidio**
Jakob + MacFarlane
A vast factory shed becomes a vibrant communications center.

106 The Sage Gateshead, *England* *by Suzanne Stephens**
Foster and Partners
Tethered to the Tyne River, this gleaming performing arts center promises to transform an industrial region into an arts mecca.

Building Types Study 848

117 Introduction: Colleges and Universities *by Deborah Snoonian, P.E.*

118 Joseph A. Steger Student Life Center, *Ohio* *by Jayne Merkel**
Moore Ruble Yudell Architects & Planners

124 Harvard Science Center Expansion, *Massachusetts*
*by Deborah Snoonian, P.E.**
Leers Weinzapfel Associates Architects

130 Evergreen Seminar II Building, *Washington* *by John Pastier**
Mahlum Architects

134 Chandler-Gilbert Student Center, *Arizona* *by Clifford A. Pearson**
Architekton

For six additional college or university projects, go to Building Types Study at **www.archrecord.com**.

Architectural Technology

155 A New Era for Fire Protection and Life Safety *by Sara Hart**
While codes and standards are updated, buildings are still rising.

163 Tech Briefs *by Deborah Snoonian, P.E.**

Lighting

155 Introduction *by William Weathersby, Jr.*

156 Escada at GUM *by William Weathersby, Jr.*
Ansorg

160 Cocoon Club *by John Peter Radulski*
3deluxe

168 Morongo Casino Resort and Spa *by William Weathersby, Jr.*
Visual Terrain

177 Euroluce Show Review *by William Weathersby, Jr.*

180 Lighting Products *by Rita Catinella Orrell*

Products

187 Landscape Options

191 Product Briefs

201 Product Literature

216 Reader Service* **216 AIA/CES Self-Report Form***

AR is the proud recipient of a
National Magazine Award for General Excellence

* You can find these stories at **www.archrecord.com**, including expanded coverage of Projects, Building Types Studies, and Web-only special features.

Visit us at archrecord.construction.com



Building Types Study

College and university building remains strong, and planners are looking closely at how new projects contribute to the overall feel of a campus. See the projects in our magazine and six additional projects exclusive to the Web.

Sponsored by

Follansbee

PPG IdeaScapes

Photo ©: Steven Evans Project: Schulich School of Business and Executive Learning Centre, York University
Architect: Hariri Pontarini Architects



Letters to the Editor

Our June feature "After Theory" by Michael Speaks has raised a lot of eyebrows and has garnered many responses. We're publishing several of the letters on our Web site. Find out what other readers have to say on the topic of the value of theory.



Courtesy Escada

Quarterly Lighting

We're darting across international datelines to report on how designers around the world are tackling diverse lighting challenges. Peruse projects from Moscow, Frankfurt, and Palm Springs.



Walldrobe/Wearpaper
Courtesy Ben Pell

archrecord2

Discover the many facets of the design firm Miloby Ideasystem. Also, have a closer look at an architectural spin on fashion—a wallpaper-clothing combo.



Residential

As we celebrate 50 years of *Record* Houses, we invite you to visit a vintage *Record* House each month in 2005. This month we take another look at Gordon Bunshaft's East Hampton house.

Sponsored by Thermador

LAMARITE COMPOSITE SHINGLES TAMKO

WebInsider

Go to our Web site and sign up for the WebInsider, your monthly guide to what's new and engaging on *Architectural Record*'s Web site.

If you look real close you can see 25 years of fire-rated glazing experience reflected in it.



SCHOTT PYRAN® fire-rated glass-ceramics are an architect's best friend.

PYRAN® is everything you've been looking for in fire-rated glass. It's fire-protective, impact-resistant and, aesthetically speaking, quite fetching. PYRAN® Crystal offers the highest standard of clarity, transmission and true color rendition. And PYRAN® Star is both beautiful and economical. PYRAN® is available with a surface applied film, laminated or polished. It comes in large sizes and is easily accessible through distributors, fabricators and glaziers. For new construction or retrofit, spec the glass with a loyal following among fire professionals – PYRAN®.

Home Tech
SCHOTT North America, Inc.
Phone: 502-657-4417
Fax: 502-966-4976
E-mail: pyran@us.schott.com
www.us.schott.com/pyran
©2005 SCHOTT North America, Inc.
® PYRAN is a registered trademark of SCHOTT AG, Mainz, Germany

CLASSIFIED UL

SCHOTT
glass made of ideas

CIRCLE 8 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The David L. Lawrence Convention Center in Pittsburgh utilizes 175,000 sq. ft. of Alucobond Material and is the largest building in the world to receive LEED™ certification.

ALUCOBOND®
MATERIAL

The original aluminum composite material.

It speaks volumes about green.

Shaping The Future

Alcan Composites USA Inc. • 800-626-3365 • www.alucobond.com

ALCAN COMPOSITES

CIRCLE 9 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Three Little Letters

Editorial

By Robert Ivy, FAIA

As if we didn't have enough initials to keep up with, three little letters now demand remembering. You may never have heard of the Union Internationale des Architectes, or U.I.A., but don't remain ignorant. This international organization, which holds a large gathering every three years, purports to represent the worldwide community of architects and their shared interests, a tall order in an increasingly global, though fractured, civilization. The U.I.A.'s recently concluded triennial Congress and Assembly, which was held in Istanbul, Turkey, from July 3 to 10, deserves a retrospective look from both sides of the Bosphorus.

First, a bit of background. Founded in 1948, the organization has wobbled from initially lofty goals to the present, with varying degrees of efficacy. In the past decade, its proceedings have occasionally seemed centered on arcane legalisms, though in fact, many topics have been of import to architects everywhere. Like the United Nations, the subject matter has sometimes been occluded by polemics, by political posturing and U.S. bashing, and plagued with financial woes (who pays for this uber-organization?). Few serious designers have given the U.I.A more than a lazy glance, but the world has changed.

This July witnessed a kind of perceptual shift, a subjective realization that the congress had been vivified. Attendance provided a key indicator: In 2005, energy fairly crackled around the gathering, as upwards of 7,500 architects flew into Istanbul for a weeklong, self-styled architectural bazaar. Dashikis, saris, and fezzes blended with blue jeans in a buzzing polyphony emblematic of the disparate character of the participants.

Youth added to the buzz, mobbing keynote speakers such as Michael Sorkin and Moshe Safdie, FAIA, like rock stars after each performance, and peppering them with bids for attention. Holding the congress adjacent to the nation's preeminent architecture school, the Istanbul Technical University, enriched proceedings too often dominated by 40-somethings. Kids were everywhere.

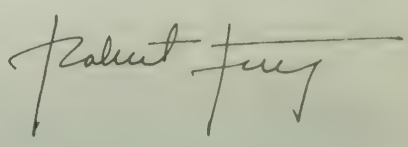
Organizers, including the current president, Turkish-born Suha Ozkan, Hon. AIA, as well as the 26,400 members of the Chamber of Architects of Turkey, served up a wealth of programmatic offerings in a variety of locales, providing a disconcerting range of events at any time. Which one to choose? Twin, simultaneous speakers often vied for attention, as did multiple panelists presenting academic papers, scattered across the cityscape.

Yet the real draw lay not in the substance of the remarks (who, after all, will remember exactly what Odile Decq said, except "to resist"), but in the mélange. Chance encounters with colleagues known and unknown, the extended conversations over cocktails, the disjunctures that brought small shocks of recognition, all added up to a broad, if incoherent overview of this confluence of people and ideas. That conceit worked. Such collisions produced their own palpable power.

Architects naturally took to the streets of the Byzantine and Ottoman capital, where, enraptured beneath the sublime dome of the architect Sinan's Suleymaniye Mosque, they could look over and spy another transfixed architecture-lover, and a conversation might ensue. Mutual appreciation—of the great treasury of architecture and urbanity—further strengthened incipient bonds.

Delegates at the assembly's final three days, which constitutes a gathering of representatives of the national member associations, reported that, despite initial political posturing, events proceeded more smoothly than in the past. A new president, Gaetan Siew from Mauritius, will take the helm, leading the organization through its next great assembly in Turin, Italy, in 2008. Tokyo will follow three years later.

At a time when international commerce seems white-hot, and all architects want to work in each other's backyards, the need for places of debate and discourse, in matters as lofty as the future of our cities or as thorny as professional reciprocity, will only increase. We encourage the increasing maturation of international organizations like the U.I.A., with its blend of academia, youth, socializing, and locale, and we are already booking our tickets to Italy for the next round.



proven performance

structural glazing

weatherproofing sealants

consistent quality

silicone pioneer

adhesive strength

impact resistance

product longevity

green construction

problem solver

technical expertise

superior warranties

risk reduction

proactive collaboration

trusted ally

respected brand name

industry leadership

reliable supply

global resources

commitment to quality



Time Warner Center, New York, New York / **Co-Developers**, Columbus Centre Developer LLC, a subsidiary of The Related Companies, and Apollo Real Estate Advisors / **Architect**, Skidmore, Owings & Merrill LLP

One million square feet of glass to install. One chance to get it right.

Your reputation is on the line with every curtainwall project. Rely on Dow Corning for silicone adhesives and sealants that deliver uncompromising quality, superior performance and unmatched product warranties. Count on us as your global partner for outstanding service and support, innovative solutions, technical expertise and reliable supply. Do it right. Do it once. Learn more at www.dowcorning.com/constructionresources.

Earn AIA Credit
New course from Dow Corning at
www.archrecord.construction.com

Construction
Solutions

DOW CORNING

©2005 Dow Corning Corporation. All rights reserved. *Dow Corning* is a registered trademark of Dow Corning Corporation. *We help you invent the future* is a trademark of Dow Corning Corporation. AV08540

CIRCLE 10 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Letters

Leave theory alone

The architecture coverage in the June issue was thoroughly engaging, though it was surprising to see that RECORD had allowed itself to become a forum for political and economic ideology. Such was the impression given by the piece bearing the disingenuous title "After Theory" by Michael Speaks [page 72], which reads like a memo in the culture wars. This humorless, anti-intellectual attack on "theory" was gratuitous at best, cynically opportunistic at worst. Having been told that "theory" is no good for capitalism, can we expect to hear next that it is unpatriotic? It is embarrassing that this posture is being falsely attributed to an entire generation of younger architects and academics. Still, it's apparently more fun for some to join the market fundamentalist party than it is to risk thinking imaginatively and critically.

—Reinhold Martin, Associate Professor of Architecture, Columbia University, and principal, Martin/Baxi Architects

Not the end of theory

I agree with Michael Speaks that design theory is finally and fortunately shedding the negativism and nihilism of Deconstruction and Marxism. His lucid essay "After Theory" in the June issue also celebrates the rise of the "post-critics," who have rejected "criticality" in favor of engagement with the marketplace and embraced proactive, so-called "projective" practices. After a generation of bingeing on abstract theory, it is time for vanguard architects to start addressing the many problems that face society. The rise of young, innovative "workshop" practices represents a return to architecture as craft, albeit high-tech.

Does this mean the end of theory? I hope not. That would only ensure critical theorists will have their revenge in the next cycle. And there is no way for our sophisticated architectural culture not to be theoretical—at least not since Alberti and Palladio raised our craft to a discipline and discourse on a par with science and the humanities. Our brains will always tend to be ahead of our hands, even though some things are better learned through the encounter with materials and tools. Although some breakthroughs come from the workshop floor, expensive and long-lived works of architecture and urbanism need intelligent and careful thought. Let's continue to be theoretical, but in a more pragmatic way that addresses environmental, social, and economic problems and opportunities, as well as aesthetic issues.

Let's also remember that not all the strategies and solutions will need to be new or innovative. Architectural production is not just market- and technology-driven. It is also an expression and embodiment of culture, which typically changes more slowly and incrementally than science and technology. Architects can help make sure people are neither overwhelmed by these changes nor left behind by them. Let's stop the pendulum before it swings from too little theory to too much theory. Maybe a little balance—that would be radical.

—Doug Kelbaugh, FAIA, Dean, University of Michigan Taubman College of Architecture and Urban Planning
Ann Arbor, Michigan

Need: theory and courage

Despite its due criticism of previous theory, Michael Speaks's essay provides yet another reactionary theoretical analogy to gnaw at the roots of the profession. Yes, working design in a spreadsheet mind-set complete with CNC milling as the place holder for the obsolete dot matrix printer is theoretically much more efficient for the innovative small practice. One can argue that efficiency breeds solutions, but at what cost? If the profession sacrifices a complex model of what architecture is and can be, where does that take us?

Architecture as information and production becomes merely a generation of speculation in steady supply instead of the very physical connective tissue of culture it has been and desperately needs to be. Thinking and doing are interconnected, but merely switching tools and terminology never generates innovation. Let's hope we will have the courage as educators, students, and professionals alike to pursue any new truth we discover—imperfect though it may be—by any and every means available to us.

—Melissa Matos
Los Angeles

Craft, not art form

"Pleased" barely describes my reaction to Speaks's essay. An architectural "theory" is woefully outclassed by those in physics or chemistry. But I am mostly concerned that being "cool" and "engaged" will soon become discarded theories in a changing world. Speaks's views would resonate more forcibly had he ratcheted up his thinking and viewed architecture as a craft, which it is, rather than an art form struggling to find an academic home.

—James A. Gresham, FAIA
Tucson

Of babies and bathwater

The "theory" that Michael Speaks addresses is not theory, but a recent bias of ideology: neo-Marxist criticism. At best, it's at the extreme end of theory.

We need to distinguish the difference between Theory, Criticism, Commentary, and Ideology. Speaks urges us to jettison "theory" and concentrate on a market-savvy design method. Design method, in its revival from the 1960s, is also a part, but not the most important part, of architectural theory.

The assertion that "theory," as Speaks abuses the term, is "not just irrelevant but continues to be an impediment" not only lacks finesse, but sense. He needs only a dictionary to learn that theory is "the general or abstract set of principles regarding a fact, science, or art." Architectural theory, the body of knowledge that defines practice, is what we know about architecture, and more important, what we want and need to know about architecture. Without theory, architectural writing is empty rhetoric, whether by Hannes Meyer or Michael Speaks.

But let's not throw out theory with the latest ideological bathwater. We must reserve for theory its role as a producer and sustainer of architectural knowledge.

—Eugene Kupper, architect and Professor Emeritus of Architecture, UCLA

Corrections

In the July issue's archrecord2 Work feature [page 48], designer Mitch McEwen's name is misspelled. In June's product review of storm-resistant windows and doors [page 208], the wrong image ran with the description of Cornell Iron Works' wind-load configurator. Also in June, the Architectural Technology introduction contained an incorrect Web address for information about classes that the architectural firm of Rafael Viñoly Architects is hosting. The correct Web address is www.rvatr.com.

Find more "After Theory" letters on www.architectural record.com. Send letters to rivy@mcgraw-hill.com.


ON TOP OF YOUR GAME
NUCOR
VULCRAFT GROUP

HOW BUILDING A LEARNING

ENVIRONMENT

HELPED PROTECT

ANOTHER.

As the largest recycling company in the world, we're a pretty natural choice for environmentally conscious projects. So when the Austin, Texas School District envisioned a green school, they called us. Using nearly 100% recycled steel, we customized joists to help form a roof that curves to conserve rainwater for reuse in the air conditioner's cooling tower. And helped keep school kids (and Mother Nature) a lot more comfortable.

It's Our Nature.®

Visit www.vulcraft.com

CIRCLE 11 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

alcoaarchitecturalproducts.com

ALCOA



Naturally Beautiful.

Just one of the many strengths of Alcoa Architectural Products' Family Of Reynobond® Natural Metal Composites.

Invite Mother Nature to be a part of your next project. Specify Reynobond Natural Metal composite panels. They provide all the functional benefits of Reynobond—with the clean, aesthetic impact provided by nature's finest elements. Like Zinc, Natural Brushed Aluminum, Copper, and Stainless Steel. They are ideal as wall panels or accents for interior or exterior applications that need to emphasize natural beauty. It's a look that can only come from nature. With strength that can only come from Alcoa Architectural Products.

Alcoa Architectural Products | build for life

For more information, contact Alcoa Architectural Products (800) 841-7774. Or visit us online at alcoaarchitecturalproducts.com.

©2004 Alcoa Architectural Products

CIRCLE 12 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Record News

Highlights

p.28 **London begins 2012 Olympic plans**
p.28 **Gehry to work on L.A.'s Grand Avenue plan**
p.30 **Russia set for building boom**
p.34 **Holl's Bellevue Arts Museum reopens**

Redesigned Freedom Tower will be sleeker, safer

After having about six weeks to rethink its plans, Skidmore, Owings & Merrill on June 29 unveiled a slenderer and safer design of the 1,776-foot-tall World Trade Center Freedom Tower. The tower's original design, the centerpiece of redevelopment at Ground Zero, had been ordered back to the drawing board by New York Governor George Pataki on May 4, after the New York Police Department noted its concern about the building's vulnerability to truck bombs. The new tower, which has a solid base and a centered spire, is much more reminiscent of local landmarks, such as the former Twin Towers and the Empire State Building.

Many of the tower's design changes stem from the need to set the building back from West Street, to its west, to limit vehicular access. The new tower will be set back about 90 feet from that street, 65 feet farther than the original proposed location. To accommodate this setback, the structure will be built on a 200-foot-by-200-foot square footprint, instead of the original plan's parallelogram-shaped base. The tower will no longer twist, but will be chamfered back from its corners, creating eight tall isosceles triangles. Maintaining the original building's torque with a square base would have been awkward, notes SOM spokesperson Elizabeth Kubany. The newly situated building will also be about 20 percent slimmer than the original Freedom Tower, says SOM. Because its amount of office space will remain the same, the thinner tower will have 69 office floors, versus 60 in the original plan.

Above these will sit an observation deck, a restaurant, and a 400-foot spire centered over the building and secured by a system of guy cables. The new spire, still in development, will be created through a collaboration with several engineers and artists. The spire's design, says lead designer David Childs, FAIA, evokes the torch of the Statue of Liberty. Its centering was necessitated for cable support, and due to requirements of the Metropolitan Television Alliance (MTVA). The original tower's planned cage of steel cables and wind turbines has been dropped. While security played the biggest role in such changes, many speculate that aesthetic and monetary concerns were also instrumental. It is unclear how the changes will affect the costs.

Another key security enhancement is the building's new 2.5- to 3-foot-thick concrete base, which will cover 80 feet of lobby space and 120 feet of mechanical and exhaust systems. To enliven and minimize what could be a bunkerlike aesthetic, the base will be sheathed in a gridded pattern of titanium and stainless steel, which Childs says will allow the light to glitter off its surface. Clerestory windows at the base's apex will admit some natural light into the open lobby, notes SOM principal Jeffrey Holmes.

To connect the set-back Freedom Tower with the street, the building will have entrances on all four sides. Tower owners Silverstein Properties have said that new landscaping will be designed by Peter Walker, who is working with Michael Arad on the World Trade Center Memorial. It remains unclear whether nearby Fulton and Vesey Streets will be open to vehicular traffic. Like the original Freedom Tower, the building will contain a concrete core throughout, although that core will now be slightly narrower. Low-iron glass will clad the rest of the building, as in the original scheme, but it will be thicker.



The new Freedom Tower will be set back considerably from the street. It will have a solid base and an obelisklike shape, with a rotated roof.

New York Governor Pataki, who admitted that he had never heard of the word "chamfered" before the redesign process, said that he liked the new Freedom Tower better than the old one, judging it "simpler and yet more elegant." He was joined on stage by World Trade Center master planner Daniel Libeskind, who, despite initial battles with Childs, praised the new design as not only better than the last, but very close to his original vision of a "slender, crystalline tower." Holmes points out that



while Libeskind did not work on the new plan, SOM utilized his master plan and design guidelines, which have been further developed. Some critics felt that the new building lacked originality, and that it fit poorly into the original master plan.

The new Freedom Tower design is reminiscent of other New York skyscrapers. The building's massive, centered antenna recalls not only the spires of the Empire State and Chrysler Buildings, but the World Trade Center's original North Tower. Its footprint size will be similar to that of the Twin Towers, while the height of its occupied space—1,362 feet at the observation deck and 1,368 feet at a glass parapet— will equal their heights. Holmes notes that the height match wasn't intentional, but was quickly discovered, and pinpointed, as the height of the tower increased. He notes that the design's other similarities to the Twin Towers and other local landmarks were "not a starting point," but that the firm is very "conscious of the engagement of that history."

Construction on the Freedom Tower is expected to begin in early 2006, with a topping out by 2009. The building is expected to be ready for tenants by 2009. *Sam Lubell*

Freedom Tower redesign—the critics respond

"Never in my most pessimistic imaginings could I have anticipated what we are now being shown: a beautiful tower rising above a solid concrete base with no windows. We are told that this 20-story bunker will be clad in a "shimmering metal curtain that will give the impression of movement and light." The operative word in that phrase is "impression." The first rule of planning for pedestrians is 'eyes on the street': windows and doors connecting inside and out. No one will happily walk past a blank wall, no matter how much it shimmers.

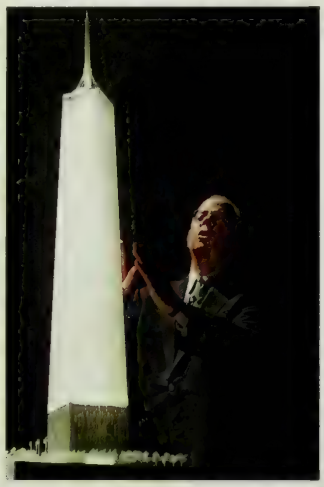
This is one of the main tenets of urban design taught to all of the mayors who attend the NEA's Mayor's Institute on City Design. It is undisputed. That a proven design failure is being proposed for such a prominent site only confirms how far from reason the security mandate has taken us." —Jeff Speck, design director, National Endowment for the Arts

"... Somber, oppressive, and clumsily conceived, the project suggests a monument to a society that has turned its back on any notion of cultural openness. It is exactly the kind of nightmare that government officials repeatedly asserted would never happen here: an impregnable tower braced against the outside world.

The new obelisk-shaped tower, which stands on an enormous, 20-story concrete pedestal, evokes a gigantic glass paperweight with a toothpick stuck on top ... As an urban object, the tower's static form and square base finally brush aside the last remnants of [Daniel] Libeskind's master plan, whose only real strength was the potential tension it created among the site's structures."—Nicolai Ourousoff, The New York Times

"The unveiling of a new and fortresslike Freedom Tower for Ground Zero ... is the latest and most visible sign that the redevelopment of the former World Trade Center site is slouching toward mediocrity.

Though it has an appealingly simple shape, which comes from the way it slopes back at its corners to what will appear from some angles to be a monumental obelisk, it still doesn't hold up its end of the skyline conversation with the Empire State and Chrysler Buildings. Their Art Deco spires conspicuously outclass its cable-stayed antenna, which represents a lackluster stab at Buck Rogers dazzle."—Blair Kamin, Chicago Tribune



Freedom Tower architect David Childs explains his design.

"Buffeted by politics, constrained by cost, shaped by fear, hurry, and the profit motive, the redesign of the Freedom Tower is better than many expected and not nearly good enough. Instead of proclaiming, 'Here is what we are capable of,' the new tower mutters, 'It's the best we could do, under the circumstances.'

... A building that is eminently practical, deeply rational, and elegant enough, but hardly the muscular symbol [New York Governor Pataki] demanded ... This is fundamentally a conventional office building sitting on the most traditional of Manhattan units: a 200-by-200-foot city block.... On any other site, or in any other city, the classical poise and proportions of Freedom Tower 2 would deserve applause.... Childs said he wanted the building to be 'handsome,' and it is, especially at the top, where the antenna is housed in a lovely halo of cables.

... Whether [the] lower chunk of the building will look like a squat refrigerator or have a textured, animated surface will depend on details that have yet to be worked out." —Justin Davidson, Newsday

"The 77-story Freedom Tower has benefited greatly from its most recent redesign. Gone are the Libeskind signature elements: the off-center spire, a clumsy visual echo of the Statue of Liberty, the trapezoidal plan, the crystalline form.... The gimmicky open-air structure at the top of the tower (which was to have housed wind turbines, of all things) is gone, too. What Childs has produced instead is a simple obelisk, an appropriate shape for a building that is, at least in part, a memorial.

The base of Freedom Tower, however, needs a lot of work. At the moment it is a masonry cube tentatively supporting a tall glass shaft. The two parts need to be integrated. By making the shaft more solid and the base more glassy, Freedom Tower could celebrate its impregnability, not hide it.

The [408-foot antenna] is obviously an architectural addition to bring the total height of the building up to 1,776 feet, making it the tallest in the world. There are two famous New York skyscrapers that had masts added to their original designs to increase their height: the Chrysler Building and the Empire State Building. But in both cases, the vertical extension was integrated into the overall design. That is not the case with the Freedom Tower ... One hopes that [Childs] is not irrevocably wedded to this concept. His handsome obelisk doesn't need a spike on its top." —Witold Rybczynski, Slate Magazine

"It is not a visionary structure. It is a very tall building ...

There's an accepted theory among writers: If you have to explain the metaphor, it doesn't work. The Freedom Tower is a metaphor not for freedom, but for politics. Its very name is contrived....

The idea of asking the public what it wanted for Ground Zero was a good one ... So what was the point of asking us what we thought if it never mattered at all?" —Alfred P. Doblin, New Jersey Herald News

"If it were just another office building, the redesigned Freedom Tower would be more appealing. Simple and elegant, its steel and glass design almost pin-striped, it would add a touch of class to the Manhattan skyline.

But Ground Zero doesn't call for an ordinary office building. Maybe some architect somewhere could design a building that would both heal and inspire, that would be as unique as the site itself and convey some of the many emotions associated with it. But the redesigned Freedom Tower isn't it. It is certainly safe and functional. But, as several critics have said, it is also sterile, mediocre, and uninspired. Whatever flair the first swirling design possessed has been lost to a squarer, more conventional shape." —Editorial, Bergen Record, Bergen County, New Jersey



Our All-Star gas cooktops feature Thermador's own celebrity: The patented Star® Burner. Its exclusive, five-point design provides unsurpassed flame spread. ExtraLow® burners from 200 BTU for delicate simmering, up to a powerful 15,000 BTU, showcase the All-Star's remarkable range. Continuous grates, a uniquely accommodating burner layout, and an ergonomic control panel with stylish new metal knobs make this cooktop the brightest star in its category. Thermador, empowering the kitchen enthusiast for more than 70 years.

WWW.THERMADOR.COM 1-800-656-9226

Thermador® | *An American Icon™*

CIRCLE 13 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

New controversies emerge at Ground Zero

As plans move forward at Ground Zero, controversies and questions continue to surface; not a surprise for a project of such magnitude.

Unpatriotic exhibits?

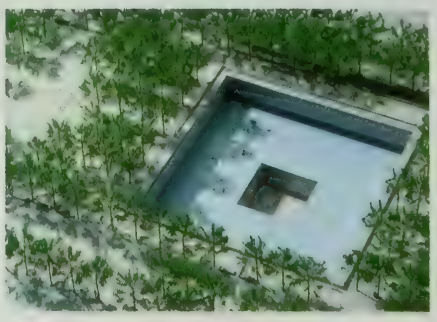
Families of victims of 9/11, already worried that the planned Ground Zero cultural complex might overshadow the World Trade Center (WTC) Memorial, say they fear that its museums might also feature exhibits that they consider insulting. Critics say shows in the International Freedom Center (IFC) may examine "unpatriotic" subjects, such as slavery. They have also targeted The Drawing Center, which has shown controversial 9/11-related art, such as an image combining sex and the Twin Towers, at its SoHo gallery.

New York Governor George Pataki responded on June 25 by saying, "We will not tolerate anything on that site that denigrates America, denigrates New York or freedom, or denigrates the sacrifice or courage that the heroes showed on September 11." That remark brought subsequent protests of censorship.

IFC executive director Tom Bernstein released the statement: "The IFC will never host 'debates' about the 'reasons' for the murder of nearly 3,000 people at the World Trade Center, nor will it be used as a forum for denigrating the country we love." The museums' fate is uncertain.

A conflict of interest?

Bernstein is also a board member of the WTC Memorial Foundation, which is raising money for both the memorial and the cultural complex. Some involved at Ground Zero have privately said this could pose a problem, inferring that Bernstein's influence on the foundation's board could sway resources toward his Freedom Center. Lynn Rasic, a spokesperson for the foundation, denied any conflict. "The board has a clear conflict-of-interest policy that we expect all members to adhere to." She notes that a recent board resolution prioritizes memorial fund-raising over other projects.



For now, Arad's memorial includes fewer ramps, more trees, and new alignment.

Memorial picked apart?

Parties involved with the WTC Memorial confirm that many of architect Michael Arad, AIA's original plans have changed. Most of the modifications have come from landscape architect Peter Walker and architect of record Max Bond, FAIA. Four ramps descending to the memorial were changed to two last December, because, says Bond, their proximity to streets caused security concerns and circulation problems. The memorial's waterfalls have been aligned with the original Twin Tower footprints, reorienting the underground Memorial Center and changing internal views of the waterfalls. Walker says victims' families requested this change. Current plans call for almost twice as many trees as in the team's original scheme, adds Walker. The Lower Manhattan Development Corporation (LMDC) did not answer requests to speak with Arad.

Design debates seemed inevitable when the LMDC partnered Arad and Handel Architects with two experienced firms, and are certainly not uncommon in a project of this scope. "I think it's important that each of the firms has its sense of things it wants to address," says Bond. Walker says he feels for Arad, confronting the realities of architecture, but notes, "People can't win every battle."

Walker and Bond, not Arad, have long been slated to sign construction documents for the project. But asked whether Arad had the chance to approve the documents, Bond's partner, Carl Krebs, said, "I don't think there's a sign-off process, and it's never been discussed." LMDC spokesperson Joanna Rose says that it is premature to comment on construction documents, but Arad will be an integral part of the review process with the design review committee.

S.L. and Kevin Lerner



Separated-at-birth department The *New York Post* reported on July 1 that David Childs's Freedom Tower seems to have been heavily influenced by the chamfered shaft of Robert A.M. Stern's initial design (now changed) for his Comcast Tower in Philadelphia. "I'm aware of the resemblance, and I'm surprised and flattered," Stern told the *Post*. *S.L.*

NIST releases World Trade Center report

In June, the National Institute of Standards and Technology (NIST) released its $16 million building and safety investigation of the World Trade Center collapse. The 10,000-page probe, conducted over three years, studied the design and construction of the buildings as well as their performance after the September 11, 2001, attacks. Considered the most extensive of any such report in history, it was funded by Congress under the National Construction Safety Team Act. NIST concluded that the Twin Towers' collapse was caused by the inability of the compromised steel frames, stripped of fireproofing in the attacks, to maintain structural integrity in the attack-caused fires.

NIST's high-rise safety suggestions include improved active fire protection, better adherence of fireproofing, and redundancy in life-safety systems, where warranted. NIST is leaving specifics up to building officials and owners, who should note buildings at higher risk due to iconic status, says Shyam Sunder, NIST's lead investigator. NIST also urges compartmentation—open areas no greater than 12,000 square feet—to discourage fire spread, and "timely" evacuation of buildings during emergencies. The report also suggests continuing education and training for architects, engineers, and fire-protection engineers, in each other's specialties.

Critics worry the suggestions might drive up construction costs without bringing real increases in public-safety benefits. *ENR* magazine

Water is Precious

Water is the most valuable resource in our world.

Water Conservation is fast becoming a global challenge.

How do we accept the challenge?

Since 1906, Sloan has provided reliable, cost-effective solutions to delivering water. We believe you share our commitment to water conservation.

Sloan's new Dual-Flush Flushometer – the first commercial Flushometer to reduce water volume by 30%.

- Lifting handle up initiates reduced flush (1.1 gpf), eliminating liquid and paper waste. Saving a 1/2-gallon of water!
- Pushing handle down initiates full flush (1.6 gpf), eliminating solid waste and paper.
- Antimicrobial coating on handle protects against germs.
- Distinctive green handle signifies water-conserving fixture

Sloan's **Water Conservation Division** and LEED®-applicable products can help you achieve your sustainability objectives.

Let Sloan's **Water Conservation Division** be your partner. For more information, contact:




Waterless urinals


Water-saving electronic faucets


Water-saving pressure-assist water closets


Water-saving showerheads


Water-saving manual and electronic Flushometers

SLOAN.

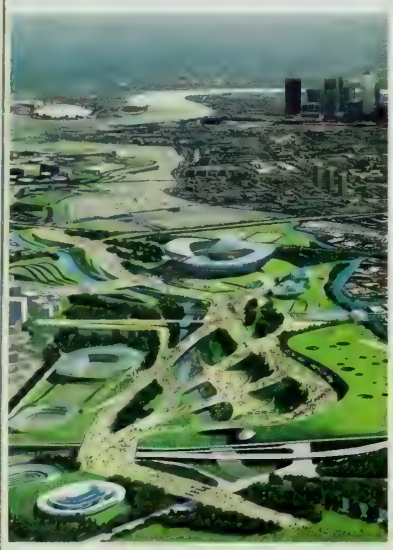
Call 800-9-VALVE-9 (800-982-5839) ext. 5609
www.sloanvalve.com

In China:
Sloan Valve Water Technologies (Suzhou) Co. Ltd., Suzhou New District, China • www.sloan.com.cn

CIRCLE 14 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS

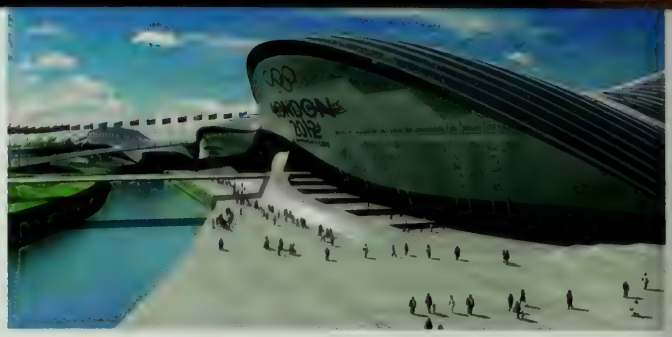
London, chosen for 2012 Summer Olympics, begins lengthy planning process

On July 6, the International Olympic Committee named London the host of the 2012 summer Olympics. The committee gave London 54 votes, while heavily favored Paris got only 50. New York, Madrid, and Moscow were eliminated in earlier rounds of voting. The cities had submitted their bids—which included detailed architectural renderings—at the end of 2004.



Planners envision an Olympic Park in England's Lower Lea Valley.

London's bid was strengthened by an ambitious proposal for a curvaceous aquatic center by Zaha Hadid (which will be implemented) and an Olympic stadium concept, featuring a sleek wraparound roof, by Foreign Office Architects (which may not). Another principal element of the bid was an Olympic master plan led by EDAW, with Foreign Office Architects, Allies and Morrison, HOK Sport, and Fluid. It proposed a 500-acre Olympic Park in the Lower Lea Valley, a poverty-stricken area about 3 miles from London's center, with a networked park structure, a new road network, and cleaned-up waterways. It also mapped out the sites for each venue. Architect Richard Rogers, chief architectural adviser to the mayor of London, feels this plan helped the city win the Olympic bid "because it used the games as a catalyst for improving the life of the city and of the nation."



Zaha Hadid is designing a curving, waterfront-located Aquatic Center.

Specifics plans for the Olympic Park are now moving forward. The cost is estimated at $917 million, with 33 venues planned, eight to be built from scratch, including the 80,000-seat, $450 million Olympic stadium; a $450 million, 12,000-seat velodrome; and a second multisport arena. A number of design competitions for these projects will be announced in October. Zaha Hadid's $117 million, 20,000-seat aquatics center is already set for completion in December 2008. That venue's S-shaped roof was inspired, officials say, by the building's riverside location. An estimated $4.13 billion will be needed to finance all Olympic facilities. Other venues include such famous spots as Hyde Park, Lord's Cricket Ground, and Wimbledon.

After the games, the Olympic Village will be adapted to residential use, and the main stadium will likely be transformed into a 25,000-seat venue.

The Olympic plan is meant not only to regenerate the Lower Lea Valley, but to accommodate London's intense eastward population expansion. A special lottery is expected to raise over half the needed funds. Meanwhile, a new planning authority, the Olympic Development Agency, will soon be introduced to speed up the process, hopefully avoiding the delays that plagued Athens in 2004. Another key issue is security, particularly in the wake of the city's recent terrorist attacks. Jason Prior of EDAW, who is leading the bid team, says the team has already investigated the spatial needs of security-related evacuation plans for the venues and park. *Lucy Bullivant*

Gehry will contribute to L.A.'s Grand Avenue project

The Related Companies of California is in talks with Frank Gehry, FAIA, to build a 35-story "iconic tower" (preliminary model, not by Gehry, far right in photo at right) and surroundings that will anchor the new $1.8 billion, up to 3.6-million-square-foot Grand Avenue housing, retail, and cultural complex in Los Angeles (right). Gehry was the designer of the Walt Disney Concert Hall, which stands across the street from the proposed commercial/residential high-rise, and from a 16-acre park, which will be redesigned.



Bill Witte, president of The Related Companies, which was chosen as the Grand Avenue project's developer last August, says an agreement with Gehry should be signed soon. Keith Mendenhall, manager of public relations for Gehry Partners, says his firm was asked by Los Angeles city representatives not to comment at this time. Construction is targeted to begin in 18 months. The $500 million first phase, which will include the tower and another building—totaling 1.3 million square feet—is expected to be completed in three years. It will be paid for with "virtually all private funding," according to Witte. The Grand Avenue Committee, a public/private partnership representing the city, the county, and various foundations, must approve the design.

Grand Avenue Committee managing director Martha Welborne, FAIA, describes the project as "urban, but not New York or Chicago." Outdoor public spaces will take advantage of local weather, she says. Neighbors include the Cathedral of Our Lady of the Angels, by Rafael Moneo, and the Museum of Contemporary Art, by Arata Isozaki.

Gehry, a longtime Southern California resident, was part of the preliminary master-plan team for the project. "He was sensitive to the placement and fit of the building, so it doesn't overwhelm Disney Hall and fits along the busy civic street," says Witte of Gehry's future tower.

Douglas Gardner, The Related Companies project developer, says he hopes to announce the rest of the design team soon. Los Angeles established the Grand Avenue Authority as a joint-powers authority in 2000 to develop the city's Bunker Hill area. Santa Monica–based Morphosis had been a member of the original team but was dropped several months ago. *J.T. Long*

Introducing the Era® Collection



KIM LIGHTING

16555 East Gale Avenue
City of Industry, CA 91745
626/968-5666

www.kimlighting.com

Made in America

HUBBELL® Hubbell Lighting, Inc.



CIRCLE 15 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Who needs China? Moscow preparing for next building boom

While the world focuses on Beijing and Shanghai as the new centers of building construction, Russia's capital, Moscow, is undergoing a transformation unmatched since the massive overhaul in the Stalin era. The building boom has overtaken huge swaths of the city; cranes and scaffolding are a common sight, an unavoidable hurdle for visitors and locals. Last year, about 50 million square feet of housing were added. Public officials have spoken of building 38 high-rises of up to 45 stories in the next several years, with 22 more expected by 2015 as part of a program known as the New Ring of Moscow. Sixty "high-rise zones" have been set apart for development.



Van Egeraat's Capital City project.

Massive projects under way are fueled both by municipal funding and private investments. One of the driving forces behind the ebullient construction market has been the city administration itself. The reigning economic model in Moscow has been described as "municipal capitalism," characterized by the government's involvement in property management and discreet links with construction companies.

At the top of the list of high-profile projects is the so-called Moscow-City business district, a sector northwest of the city center that has been designated as the future administrative and financial nucleus. It will occupy an area of around 250 acres, 60 of which comprise the zone of construction. The development will add 27 million square feet of mixed-use space. The planned series of towers and modern infrastructure promise an infusion of high-tech energy whose vertical extension will resemble Kuala Lumpur and Shanghai more than a European metropolis. The buildings will stretch along the Moskva River embankment, grouped around an elongated central square.

The steel-and-glass aesthetic of the towers will not break new stylistic ground, but the district planners have formulated an unusually elaborate color conception for the area. It aims to extend the polychromatic character of Moscow and features a set of distinguishing cues. The future building of the city government, for example, will be marked by highlights of red, the presumed color of power, while many towers will end in golden tops, meant to evoke the cupolas of Christian Orthodox churches.

Most of the district's design work has been allocated to foreign firms, including U.S.-based Swanke Hayden Connell Architects, German-based Behnisch, Behnisch & Partner, Netherlands-based Erick van Egeraat Associated Architects, British-based Arup, and German-based Peter Schweger and Sergei Tchoban. The plan has been more than 10 years in the making, and few elements have been completed. But conversations with local planners and city architects suggest that implementation is only a matter of time.

Other high-profile projects are under way. Sergei Tkachenko, the director of Moscow's Institute of City Planning, says he has been working closely with Norman Foster on one of the city's new high-rises. Zaha Hadid has been commissioned to design two residential towers in the city center, while Rem Koolhaas and OMA are working on the redevelopment of four massive housing blocks built in the 1960s on the periphery of Moscow.

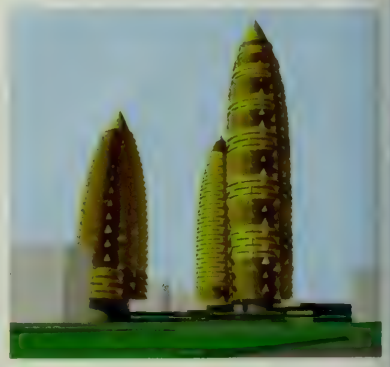


A sketch of the Moscow City district envisions golden-colored towers and red government buildings.

Stefan Behnisch of Behnisch, Behnisch is bullish about the city's prospects. His firm has secured a commission to design a massive transit hub in Moscow-City. The project has temporarily stalled, but he attributes the delays to the inherent complexity of such a vast enterprise. "I would still rather work in Russia than in China," he says. "Once this gold-rush stage ends, a quality-driven process will take over."

Despite the ambitious rhetoric by city officials, skepticism still abounds. Doubters broadly divide into two groups. Aleksei Komech, the director of the State Institute of Art History, believes the towers irreparably wreck the traditional skyline and ruin the visual perspectives across the city. Others believe the high-rise development is likely to exacerbate existing problems. Aleksandr Lebedev, a Russian parliament member and a Moscow mayoral candidate in 2003, said in an interview that Moscow-City cannot possibly meet one of its stated goals of relieving traffic congestion. It is still positioned too close to the center to have an effect, he said. The exorbitant expenses are also a consideration. "Moscow-City has turned into a black financial hole for the city, entailing enormous expenditures, calculated in billions of dollars," says Lebedev.

Unlike the growth of countless cities in China, Moscow's growth is fairly unique for Russia. Only a few oil-boom towns further east are experiencing remotely comparable growth. Officially the city has invested only around $360 million to $370 million in engineering and infrastructure, which it hopes to recoup later through taxes and concessions. The bulk of investment in construction is expected to come from private developers. Moscow has suffered 70 years of misguided Soviet planning, which left a legacy not only of bleak housing projects but also produced a sprawling and muddled urban space. The recent plans envision a polycentric blueprint that establishes a new focus for future growth. *Paul Abelsky*



Cone-shaped high-rises proposed for Chongarsky Boulevard in Moscow.



Hop on over to our pad for a colorful new palette filled with the latest laminates from Nevamar. Available in both High Pressure Laminates and LamMates™ TFM Panels. Six new exotic wood grains complete the most unusual and exciting collection anywhere. While six expressive new patterns will jumpstart dozens of innovative design ideas. Of course, our High Pressure Laminate is protected by the exclusive Armored Protection™ Surface for long, beautiful life. So if you really want to make a splash, take the leap to Nevamar. This pond is different.

www.nevamar.com • 800-638-4380

NEVAMAR®
DECORATIVE SURFACES

© 2005 Nevamar Company, LLC.
All Rights Reserved.

CIRCLE 16 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

INTRODUCING
WOOD
BALANCED
DOORS

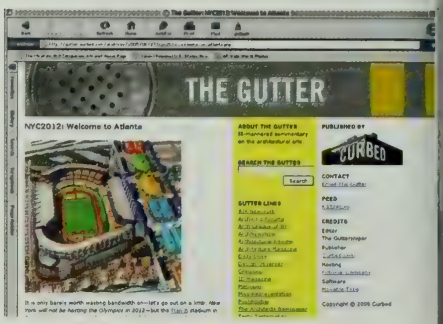


Wood doors that use the renowned Ellison Balanced Door hardware and frames are now available. For information on wood selection and door design contact our factory.

ellison
Ellison Bronze, Inc.
800-665-6445
www.ellisonbronze.com

CIRCLE 17 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

The Gutter dishes "ill-mannered" scoop



The site skewers the New York Mets' stadium plans.

Finally, the architecture community has something juicy to talk about. It's a blog called *The Gutter*, which resides at www.gutter.curbed.com. The site, which began issuing updates about daily events on May 9, takes an ultra-sharp (some would say snarky) point of view. Hence its tagline: "Ill-mannered commentary on the architectural arts."

The anonymous "guttersniper," as the blogger has named him or herself, has covered more happenings (mostly in New York) than most design publications. Recent subjects for ridicule have included *New York Times* architecture critic Nicolai Ourousoff (who the sniper calls "Big Nic"), Daniel Libeskind (the site said his recent Ground Zero editorial in the *Times* "gave hubris a bad name"), Frank Gehry (called a "developer's bitch"), and the New York Mets' stadium plan ("Welcome to Atlanta").

Gutter and its parent, www.curbed.com, a site that focuses on New York real estate and neighborhoods, are published by Gawker Media, which owns trendy sites like political blog wonkette.com, and technology blog gizmodo.com. Gizmodo was the first Gawker site to go live, in May 2002.

Lockhart Steele, publisher of *The Gutter* and *Curbed*, notes *Gutter* has about 4,000 daily visitors. He touts the site's format, which deviates from the "flat" style and "limited coverage" of mainstream media, and "talks about the things everybody is talking about, but everybody is afraid to write," he says. As for those upset about the nasty attacks from, or the anonymity of, the guttersniper, "If people are uncomfortable, don't read the site."

Steele refuses to name the now-infamous guttersniper, which is itself one of the site's biggest intrigues. Architects and journalists (strangely unified by the site) are wracking their brains in an architectural version of the recently solved Deep Throat mystery. The *Times* even sent out a reporter, in vain, to find him or her, notes Steele. (All of ARCHITECTURAL RECORD's staff have denied involvement.) Steele, who some think is the site's author himself, did drop one hint when he said, "It's rumored that the guttersniper is two people … one is a male and one is a female." Stay tuned. *S.L.*

WMF Watch List includes ancient and modern



Neutra's Cyclorama Center is on the list.

Ancient and modern figure in unprecedented ways on the 2006 World Monuments Fund (WMF) Watch List, announced in June. Every two years, the WMF assembles experts to identify 100 imperiled cultural and architectural sites around the world.

Events in Iraq prompted the inclusion on the list, for the first time, of an entire country. The WMF notes recent damage to Iraq's ancient Ziggurat at Ur and the 9th-century Spiral Minaret at Samarra. Also for the first time, the Watch List includes buildings from the second half of the 20th century.

Edward Durell Stone's 1965 Two Columbus Circle in New York City, Richard Neutra's 1963 Cyclorama Center at Gettysburg, Pennsylvania, and Oscar Neimeyer's 1963 International Fairground in Tripoli, Lebanon, are all slated for radical renovation or demolition by the end of 2005. "All three sites," says World Monuments Fund president Bonnie Burnham, "have systematically not been recognized by their owners or the community as significant architectural icons and lack a designation to protect them." The preservation of Postwar Modernism, Burnham notes, is compromised by the influence of "taste rather than some kind of objective standard. Aesthetic issues are very subjective at such a short remove in time."

Other sites include Frank Lloyd Wright's Ennis Brown House in California, Ernest Hemingway's home at Fincá Vigiá, Cuba, Shackleton's Expedition Hut in Antarctica, the Haji Piyada Mosque in Afghanistan, and the 1936 Helsinki-Malmi airport terminal in Finland. *Thomas De Monchaux*

Meet the Door with a Split Personality

Power operation only when you need it.
Balanced door operation when you don't.



POWER NOW

Patent Pending

Power Now is a classic balanced door during manual operation, and opens with power only when needed. Our revolutionary design eliminates complicated, unsightly surface mounted hardware. A concealed low energy operator and actuating arm provide opening force on demand. Our standard hardware provides the closing force. When used manually Power Now is pure Ellison.

ellison

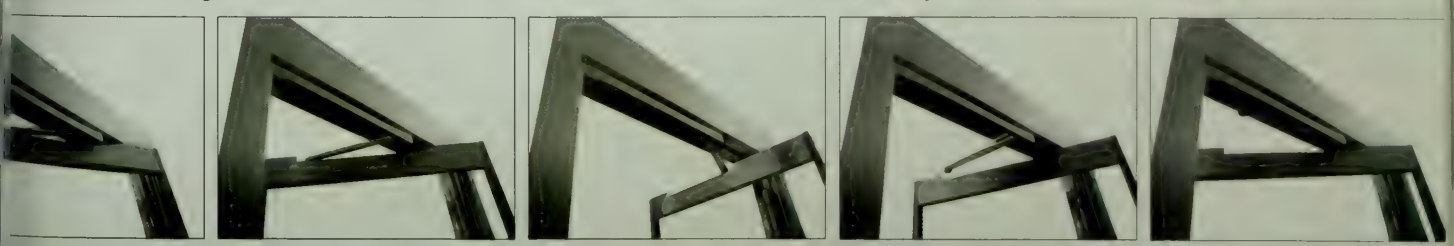
Ellison Bronze, Inc.

www.ellisonbronze.com

CIRCLE 18 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

IT THE SWITCH

ower opens the door on demand, ellison closes it.



Mortar Net®
USA LTD.

with mortar net there is NO "or equal"



McCormick Place West
Chicago, IL



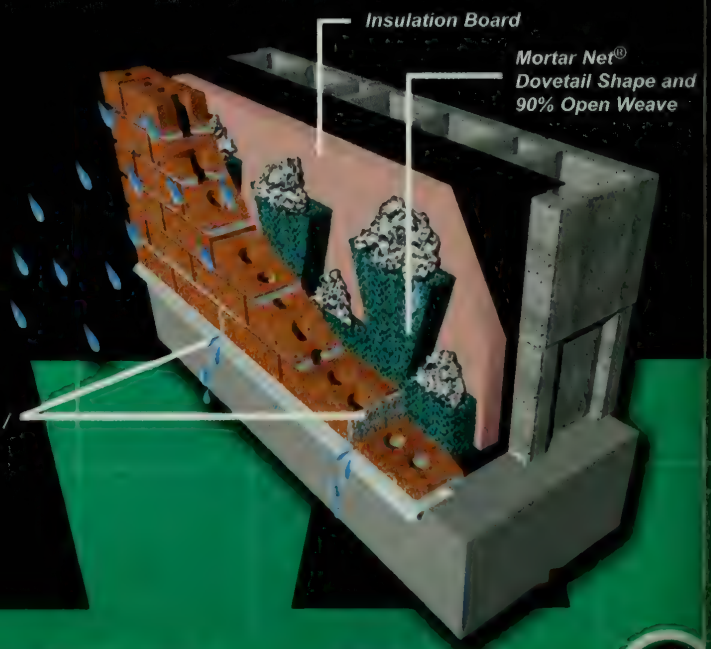
Sprint Headquarters
Overland Park, KS



Bricktown Ballpark
Oklahoma City, OK

At Mortar Net USA, we invent solutions. We've won multiple U.S. patents for our low-cost systems that effectively prevent moisture-buildup in open-cavity masonry walls. These simple to install systems feature a tough, 90% open-weave polyester mesh, with anti-microbial qualities, that lets interior moisture drain to the outdoors unimpeded by mortar-droppings or debris. By eliminating moisture-buildup, we also eliminated efflorescence and freeze/thaw damage. But best of all, our systems help to deliver in the industry's long-fought battle against mold. With many insurance companies no longer covering mold claims, today's builders insist on our patented moisture-dispersal systems. They've discovered there's absolutely no "or equal" for Mortar Net, BlockNet, or Blok-Flash.*

*Source: United States Patent and Trademark Office



800-664-6638
www.MortarNet.com/ar

- Mortar Net®
- Weep Vents™
- BlockNet®
- Blok-Flash®

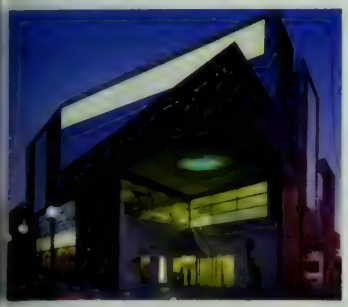
ARCAT

Use of our products can help you obtain credits for LEED™ Green Building Certification

CIRCLE 19 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Bellevue Arts Museum reopens

On June 18, after a 20-month hiatus, the Bellevue Arts Museum (BMA) (formerly Bellevue Art Museum), near Seattle, reopened with a new mission, name, and look. In 2001, the museum moved into its Steven Holl–designed home with the aims of presenting cutting-edge contemporary art and providing extensive arts education. In a culturally conservative suburb of Seattle, BAM chose to curtail its education programs and shift its exhibition focus to craft and design, says new director Michael Monroe.



An $800,000 museum makeover.

Monroe, also an exhibition designer, oversaw an $800,000 remodeling meant to make the building more intimate, more workable for shows, and better attuned to its new mission, "while attempting to continue Holl's vocabulary," he says. To lighten the interior, his team repainted the walls of the main level in paler tones, improved exhibition lighting and spacing, and covered cracking concrete floors with carpeting. A library and arts studio were converted to galleries, and an artist-in-residence studio has become a docent space.

Circulation was improved by a trapezoidal vestibule, arising from a Holl design study, created to serve the top-floor galleries; other changes were largely executed by local firm Scalater Architects.

Holl's office has taken the changes in stride. "BAM is an institution in evolution," says Holl staffer Chris McVoy, "and was designed to withstand changes." *John Pastier*

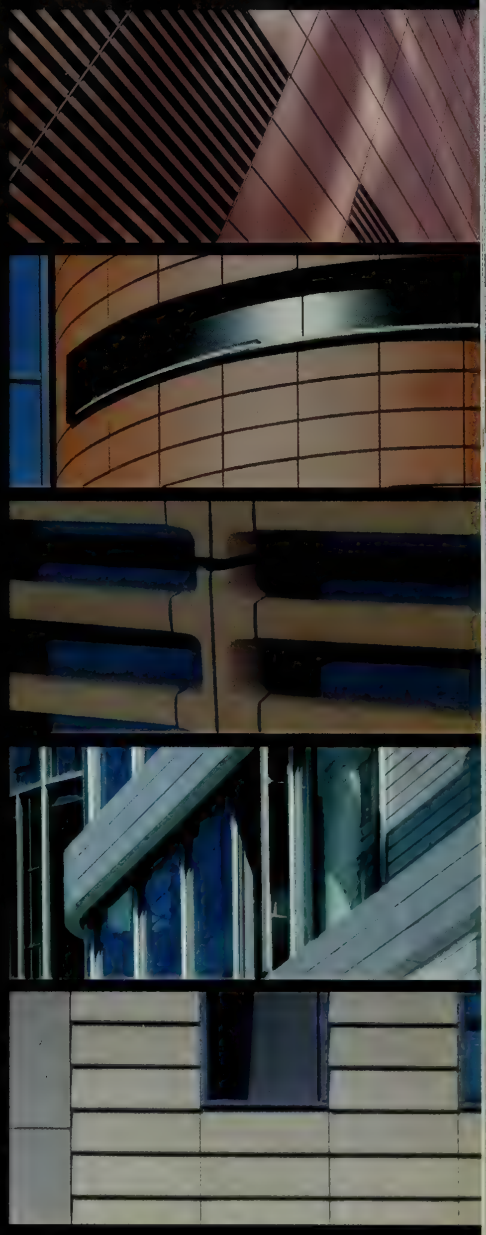
Washington enacts LEED legislation

At press time, Washington was about to become the first state to enact legislation requiring its own buildings to achieve U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED) Silver certification. The rating is the third-highest offered, after Gold and Platinum. Senate Bill 5509, signed by Governor Christine Gregoire on April 8, was set to take effect on July 24. It requires that projects of more than 5,000 square feet receive the Silver rating. The only exceptions are some hospitals, labs, and utility buildings. Washington had already required that all state buildings achieve minimum LEED certification.

Gregoire says she hopes the legislation will encourage "everybody from mall developers to home builders" to use similar building techniques. The Washington legislature's Capitol Budget Committee estimates that statewide operating expenses for government buildings could be lowered by as much as 30 percent if all of them received the Silver rating. Still, Glen Gilbert, president of the Cascadia chapter of the USGBC, says that only 3 or 4 percent of local structures vie for LEED certification. The rest, he says, won't do so "unless it makes good business sense," he says.

Arizona, California, Maryland, and Michigan have issued executive orders to encourage LEED certification, but Washington is the first do so by legislative act. Nevada became the second state to pass legislation requiring minimum LEED-rated government buildings on June 17. ***Brian Libby***

ARCHITECTURAL TERRACOTTA



TERRART®
Façade design with large-format ceramic elements for a unique architectural style.

Progress through diversity.

CIRCLE 20 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

nbk

www.nbkusa.com

National Sales Manager,
North America Inc. · F.J. „Bud" Streff, jr.
74 Atlantic Avenue, Marblehead, MA 01945
Phone (7 81) 6 39 - 26 62 · Fax 6 39 - 80 55
E-Mail: budstreff@nbkusa.com

www.nbk.de

Emerge



Break through. Enhance any project with the natural charm of factory-finished wood veneers or the splendor and versatility of laminates. And know that they'll remain beautiful for a lifetime. Guaranteed. So get your project off the ground and out of the ordinary with VT Architectural Wood Doors.

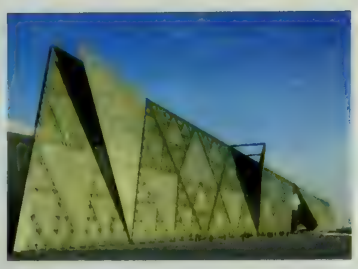
Call 1-800-827-1615 ext. 210 or visit www.vtindustries.com/doors

VT INDUSTRIES **Architectural Wood Doors**

CIRCLE 21 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Updated design for new Egyptian Museum

In late June, Egypt's minister of culture unveiled its updated plans for the Grand Egyptian Museum (GEM), which is being designed by Dublin-based Heneghan.Peng Architects. The firm was chosen in 2002 through a competition.

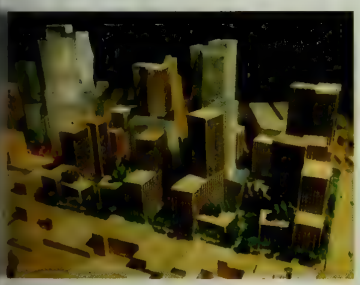


Heneghan.Peng's newest design.

The complex of museums and educational and cultural facilities will be built on the desert plateau beside the Giza pyramids on the outskirts of Cairo. It will replace the current GEM, a monumental structure built in 1902 in the city center, which contains the world's largest collection of Pharaonic artifacts, crammed storeroom fashion into its poorly lit galleries.

The new design, a horizontal structure inlaid with expanses of thin translucent stone, is imbedded into the plateau's gently undulating topography. It provides rare views of the pyramids framed by the desert, instead of by Cairo's urban sprawl. Rather than compete with what may be the longest-standing icons of monumentalism, the architects chose to emphasize understatement.

The 125-acre complex, which will also include open spaces, is expected to be completed by 2009 at a cost of $550 million. Financing will be made available through Egypt's Supreme Council of Antiquities, and via funding from the Japanese government. *Seif El-Rashidi*



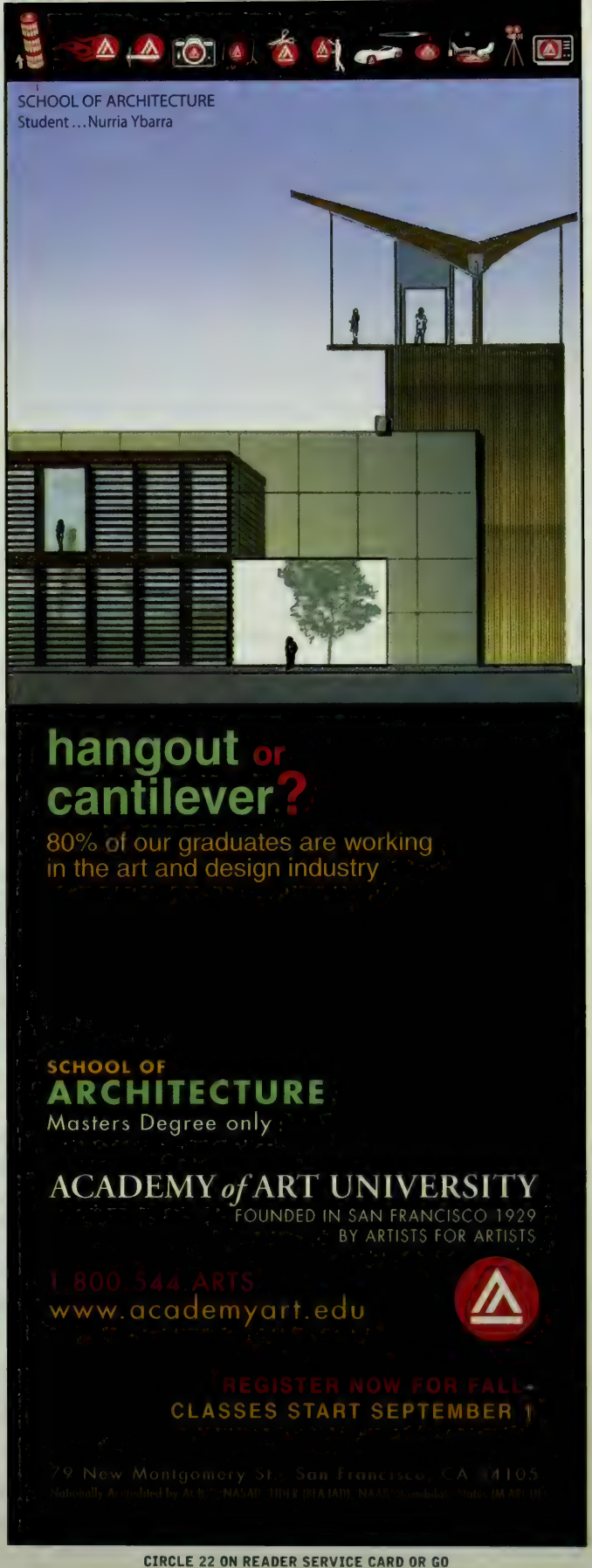
A model of the Brooklyn project.

Gehry's Brooklyn plan bigger than first thought

In the excitement surrounding developer Bruce Ratner's proposed Nets Arena [RECORD, January, 2004, page 26] in downtown Brooklyn, less attention was paid to the scheme's other, much more expansive elements.

Frank Gehry, FAIA's updated renderings, revealed in June, show an enormous 21-acre zone of commercial and residential development with a scale that will easily shock, impress, or bewilder. The still-preliminary designs for the $3.5 billion project include the 19,000-seat arena, 12 high-rise residential buildings, 7.4 acres of open space (including gardens, pathways, and an ice-skating rink), and four office towers of 35 to 60 stories. The boxy skyscrapers exhibit Gehry's flair for the twisted and askew, and the tallest among them—the 620-foot "Miss Brooklyn"—would surpass the Williamsburg Savings Bank as the borough's highest building.

Responding to several local groups that bemoaned the project's disruptive effect, Forest City Ratner Companies (FCRC) executive vice president Jim Stuckey, said, "If all you do is replace in kind, you're a net loser." On July 6, FCRC submitted a bid for the MTA-owned portion of the site. A competing team, Extell Development Company, submitted a significantly smaller plan, with no arena. Many locals opposed to the arena back that plan. *Ilan Kayatsky*



CIRCLE 22 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Supreme Court okays government seizure of property through eminent domain

The U.S. Supreme Court has given cities and other local governments the green light to seize individual homes and businesses for private development. The decision essentially extends the scope of the Fifth Amendment, which allows governments to take private property through eminent domain if the land is for "public use."

In a 5-to-4 ruling on June 23, the justices ruled that local officials, not federal judges, were the most knowledgeable to decide whether a community would be best served by a proposed development project. "It is not for the courts to oversee the choice of the boundary line nor to sit in review on the size of a particular project area," Justice John Paul Stevens wrote for the majority, which included Justices Anthony Kennedy, David H. Souter, Ruth Bader Ginsburg, and Stephen G. Breyer.

The decision in *Kelo* et al v. *City of New London* enables several New London, Connecticut, homes to be razed to make way for a riverfront hotel, health club, and office complex. City officials had argued that the private development project would boost economic growth, and that public purpose outweighed homeowners' property rights, even if the area was not blighted.

In a dissenting opinion, Justice Sandra Day O'Connor wrote: "Any property may now be taken for the benefit of another private party, but the fallout from this decision will not be random." Beneficiaries from the ruling would likely be "large corporations and development firms," she added. *Sheri Winston, for ENR*

SCI-Arc loses fight to buy its home

On June 21, Southern California Institute of Architecture (SCI-Arc) lost its legal battle over who had the right to buy the historic Santa Fe Freight Depot (below) where the school has been housed for five years. A Los Angeles Superior Court judge found that an agreement between SCI-Arc and the building's owner, Dynamic Builders Inc., which SCI-Arc had assumed gave it the right to buy the property, was not binding. The court's ruling allows Dynamic Builders to complete the sale of the building to Los Angeles developer Richard Meruelo. Meruelo is also moving forward on developing three adjoining parcels of land that he owns. One of Meruelo's original proposals for the site had included two large residential towers, but a story in the *Los Angeles Times* quoted him as saying he is not wedded to that idea and wants to build a project that would be "urban, dense, and bold."



SCI-Arc has a 19-year lease on the building and doesn't intend to move, says school director Eric Owen Moss. Moss says that prior to Meruelo's bid for the property, and the subsequent lawsuit, SCI-Arc had produced a conceptual plan for the redevelopment of the area. It's not clear whether any of the institutes' ideas will be implemented in Meruelo's development, but both parties seem to have put hostilities aside long enough to agree to work together on a new plan. *Allison Milionis*

BSD speclink

LEED

Specifications and built-in automation for simplifying LEED certification:

- Two new intelligent checklist sections automatically activate relevant green sections and select specific provisions
- Green building provisions added to relevant sections
- LEED submittals added to relevant sections
- Automatic LEED submittals report

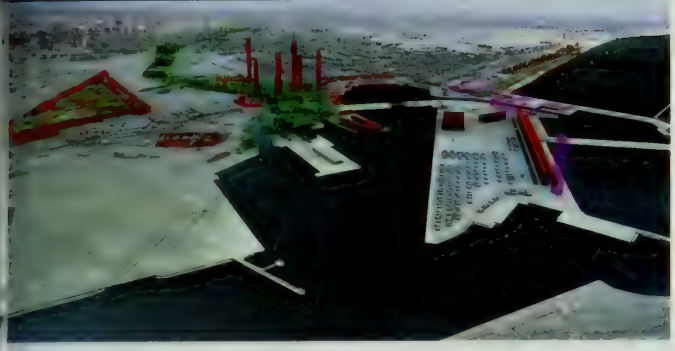
1-888-BSD-SOFT 1-888-273-7638
Visit our website: www.bsdsoftlink.com

Microsoft GOLD CERTIFIED Partner

BSD Building Systems Design, Inc.

Exclusive offering of CSI-DBIA and BSD.

CIRCLE 23 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





America's Cup spurring major changes in Valencia, Spain

Several waterfront plans are emerging in the Mediterranean port of Valencia, Spain, stemming to some extent from its selection in 2003 as the host of the 2007 America's Cup sailing race. The city's feverish response confirms that the sporting event has become a playing piece in the economic rivalry between the Mediterranean's major ports. Other cities vying for the cup were Marseilles, Naples, and Barcelona.

The Spanish government is backing the city with $1.2 billion for infrastructure improvements related to the event, including port and transportation upgrades. The most recent design plan came this June, when David Chipperfield and Barcelona architect Fermín Vázquez won a competition (sponsored by the federal, state, and local governments) for the America's Cup "foredeck," a viewing stand and clubhouse at the mouth of the city's harbor. Designed as a stack of cantilevered slabs beside a park with waterside grandstands, the building should catalyze the port's transformation for recreational uses.

Prior to this announcement, several other waterside plans—some competing, and all speeded along by the race—were beginning to make their way forward. In November 2004, developer Ignacio Jiménez de Laiglesia presented "Valencia Litoral," prepared by Jean Nouvel and others, that combines dense coastal development, including a cluster of towers up to 60 stories high around the port, with historic and environmental preservation. A few days later, the city presented Santiago Calatrava's addition to his City of the Arts and Sciences, three soaring tubular towers, the tallest at 1,000 feet. The city also announced an urban design competition (which critics called "overreaching and too expensive") to develop the portside area of the Grau, a 90-acre former industrial site near the mouth of the Turia River. One participant, German-based GMP, proposed two 50-story towers facing the port. While no winner has been announced, Mayor Rita Barberá declared that the plans "will convert Valencia into the world's leading city in modern architecture." *David Cohn*

Nouvel's Valencia Litoral plan (left) includes dense coastal development. Chipperfield's "foredock" plan (right) will be a race centerpiece.

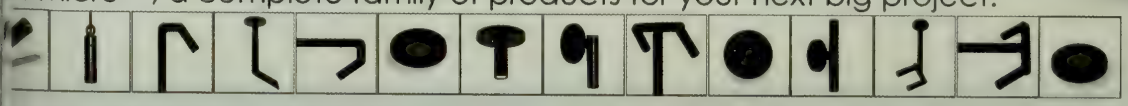
NTRODUCING
HE NEXT
BIG
HING IN
IGHTING

Winner of the Best of Category Award for Specialty Luminaires at LIGHTFAIR 2005



oducing Mini-Micro™, a product less than half the size of our original MR16 fixture.
i-Micro's™ incorporate new halogen and solid-state technologies that enable an
redible reduction in fixture size, without sacrificing performance.

i-Micro™, a complete family of products for your next big project.



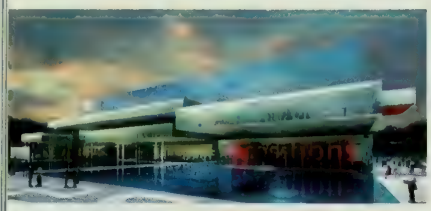
shown
actual size

B-K LIGHTING
Quality to Last a Lifetime™
559.438.5800 • www.bklighting.com

CLE 24 ON READER SERVICE CARD OR GO
/CHRECORD.CONSTRUCTION.COM/PRODUCTS/

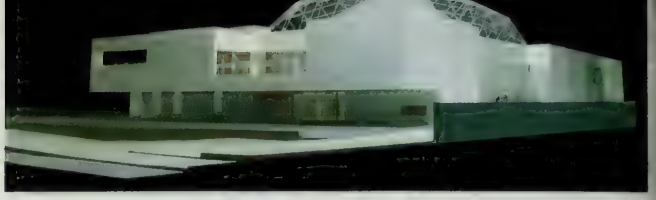
Fuksas designing new French archives

Massimiliano Fuksas (Fiera Milano project, page 92) recently won a competition to design the $147 million State Archives Centre in Pierrefitte-sur-Seine, a suburban town north of Paris. Housing state documents that date back to the French Revolution, the center will accommodate the expanding collection for another three decades. The northern end of the site will allow for additional building work and the future expansion of the warehouse.



Documents will be stored in concrete-walled rooms within a 591-foot-long perforated-steel box. Seven horizontal boxes, containing offices, meeting rooms, and reception, will cantilever out from the west facade, above an outdoor reflecting pool. The cantilevered boxes, facing the neighboring houses to the west, are meant to reduce the visual impact of the 154-foot-high building. The planting of new trees around the center will also help to integrate it into the landscape.

In addition to being a storage facility, the center "has to be a public space," said Fuksas. And while serving as a destination for the architectural tourist, "the building can help the periphery. It is a part of the positive process of development of the [Parisian] suburbs," he said. The completion date is 2009 *Robert Such*



Maki combines Modernism and Islam

Tokyo-based Fumihiko Maki is designing a center for the Aga Khan Development Network called the Delegation of the Ismaili Imamat. The Modernist building in Ottawa, Canada, is influenced by Islamic design. When it is completed in 2007, it will be the first headquarters for the network, which supports educational and research projects at the behest of the Muslim spiritual leader.

The 92,247-square-foot facility is being designed with Moriyama & Teshima Architects of Toronto. It will occupy a prominent site facing Sussex Drive, which is lined by Parliament Hill, the residences of the governor and prime minister; civic and cultural facilities; and several embassies. Conceived as a "pavilion in a park," according to Maki, the rectangular building will "emanate a feeling of openness" but will sit on a granite podium intended to provide a stately presence, and to mitigate the sloping site's grade changes.

Lining the building's perimeter will be residential, institutional, and administrative components, unified by a central covered atrium and an adjacent open courtyard. The courtyard was inspired by the traditional Persian-Islamic *chahr-bagh*, a garden contained within walls and divided into quadrants by intersecting pathways. The glazed atrium's faceted form was inspired by rock crystal, while in contrast to the rectilinear building below, the glass dome capping the atrium creates a distinctive silhouette. *Naomi Pollock, AIA*

HIGH SECURITY BIKE STORAGE



Custom perforated patterns on the doors and sides provide an attractive design element that enhances security. Seeing what's inside the locker ensures that they are used *for bike storage only.*

Huntco offers a variety of all-steel bike lockers that now feature *on-demand, keyless bike storage*, utilizing cell phone technology, that assures complete security. Optional bike lock, padlock or key locking systems are available.

www.huntco.com
1.800.547.5909

Huntco
SITE FURNISHINGS

TRADITION. INNOVATION. SECURITY.

CIRCLE 25 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Even through the fiercest of storms,

there is a calm that endures.



build for life

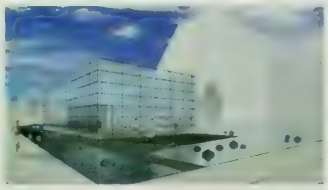
www.kawneer.com

architectural aluminum systems • entrances and framing • curtain walls • windows

Kawneer
An Alcoa Company

ALCOA

Pavilion planned for Boston's Rose Kennedy Greenway New York–based firm Stephen Yablon Architect has won a competition to design a 2,500-square-foot visitor center on Boston's Rose Kennedy Greenway. The $3 million building will serve as a gateway to the Boston Harbor Islands National Park, and is

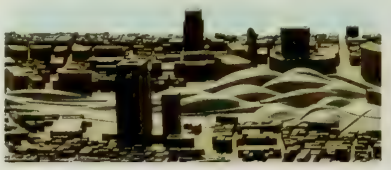


A reflecting pool surrounds the pavilion.

expected to be one of the first structures to be completed on the greenway, whose land was made available by the dismantling of Boston's Central Artery highway. The pavilion is slated to open in 2007.

Yablon's design is a sheer glass box set on a stone base surrounded by a shallow reflecting pool. It will contain the park's visitor center, a café, and bookstore. Display screens, visible from the interior and exterior, will be embedded in the structure's walls. The greenway comprises a 30-acre crescent that runs from North Station to Chinatown. Its parks are not expected to be completed before 2007. *Ted Smalley Bowen*

Archiprix awards students Every two years, Archiprix International, an arm of the Dutch-based Archiprix Foundation, gives awards for "the world's best graduation projects." This June, in Glasgow, Scotland, nearly 200 universities from 67 countries participated. An independent panel of jurors selected six winners. One of these, Austria-based Jens Mehlan and Jörg Hugo's Osaka Urban Station proposes to insert an architectural "landscape"



"Osakaurbanstation," an Archiprix winner.

—a series of "blobular" pods—into a dense city setting. Other winners hailed from Japan, Finland, Italy, Canada, and Uruguay. *S.L.*

Gehry's American Center in Paris gets new lease on life In June, French film libraries Cinémathèque Française and Bibliothèque du Film, moved into the renovated former American Center on rue de Bercy in Paris.

Designed by Frank Gehry, the American Center—which once held language, dance, theater, and music courses—closed its doors for lack of funds in 1996. Purchased by the state two years later, the building has had its interior remodeled by Paris-based Atelier de l'Île at a cost of $40 million. *Robert Such*

ENDNOTES

• The National Endowment for the Arts has launched the Governors' Institute on Community Design, pairing government officials with top planning experts to create development strategies.

• Marilyn Jordan Taylor, FAIA, partner at SOM, has been appointed chairperson of the Washington, D.C.–based Urban Land Institute (ULI). She will be the first architect, and the first woman, to head the research and education institute since it was established in 1936.

• Designer Yves Béhar has been appointed chair of the Industrial Design Program at California College of the Arts.



Gehry's American Center in Paris becomes a film library.

Kalwall® Since 1955 50 Years of Innovation!
...Light-Years Ahead!™

Healthy daylighting... efficient, economical and green. LEED™ participant. Now with Kalwall+ Nanogel® U-values as low as .05 (R-20)!

Learn more about the latest in daylighting technology at www.kalwall.com.

800-258-9777 (N. America)

For monumental, translucent clearspan Skyroof™ systems, consider our strategic partners...

Structures Unlimited, Inc.

And for tensioned fabric structures...

SPAN SYSTEMS, INC.

Nuner Elementary School, South Bend, IN; Hellard & Hebard Architects; hillaryphoto.com, Photography

CIRCLE 26 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS



CEDAR.

DOESN'T YOUR NEXT PROJECT DESERVE IT?

WHAT SEPARATES STUNNING HOMES FROM THOSE THAT ARE SIMPLY NICE? IMPECCABLE CRAFTSMANSHIP AND THE FINEST MATERIALS. THAT'S WHY SO MANY DISCRIMINATING ARCHITECTS CHOOSE WESTERN RED CEDAR. NOTHING MATCHES THE ELEGANCE AND WARMTH OF CEDAR. IT CONVEYS A MESSAGE OF SOPHISTICATION AND STYLE THAT SETS A HOME APART.

WHEN ONLY THE BEST WILL DO, CHOOSE WESTERN RED CEDAR. YOU AND YOUR PROJECTS DESERVE IT.

WESTERN RED CEDAR LUMBER ASSOCIATION

REALCEDAR

1-866-778-9096

FOR MORE INFORMATION ON CEDAR, VISIT

REALCEDAR.ORG

CIRCLE 27 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

IF YOU'VE BEEN WAITING FOR WOOD MILLWORK THAT RESISTS SPLITTING, DECAYING AND INSECTS, YOUR PRAYERS HAVE BEEN ANSWERED.

THE ANSWER IS NO.

Lightweight and easy to install, polyurethane millwork and trim from Fypon® will never split, chip or decay. Requiring only standard woodworking tools and almost no maintenance, it saves time during and after installation. And because compound mouldings can be made with a single moulding profile, it makes complex jobs surprisingly simple. So simple in fact, you never have to be disappointed by wood again.



FYPON

www.fypon.com 1 800 446 3040

CIRCLE 28 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

FYAR0805NO-0709/FY163









YKK AP *is...* *your choice.*

YKK AP aims to increase the value of buildings by providing entrance and window systems that offer quality, diversity, and innovation, built on our extensive experience with major projects around the world. Our customers know that they can rely on us for consistent manufacturing, precision engineering, and dependable customer service. Through the use of our advanced technologies, YKK AP seeks to provide a variety of architectural aluminum products to fit the specific requirements of your job – from A to Z, small to big, simple to complex.

Make YKK AP *your choice* for architectural aluminum products.

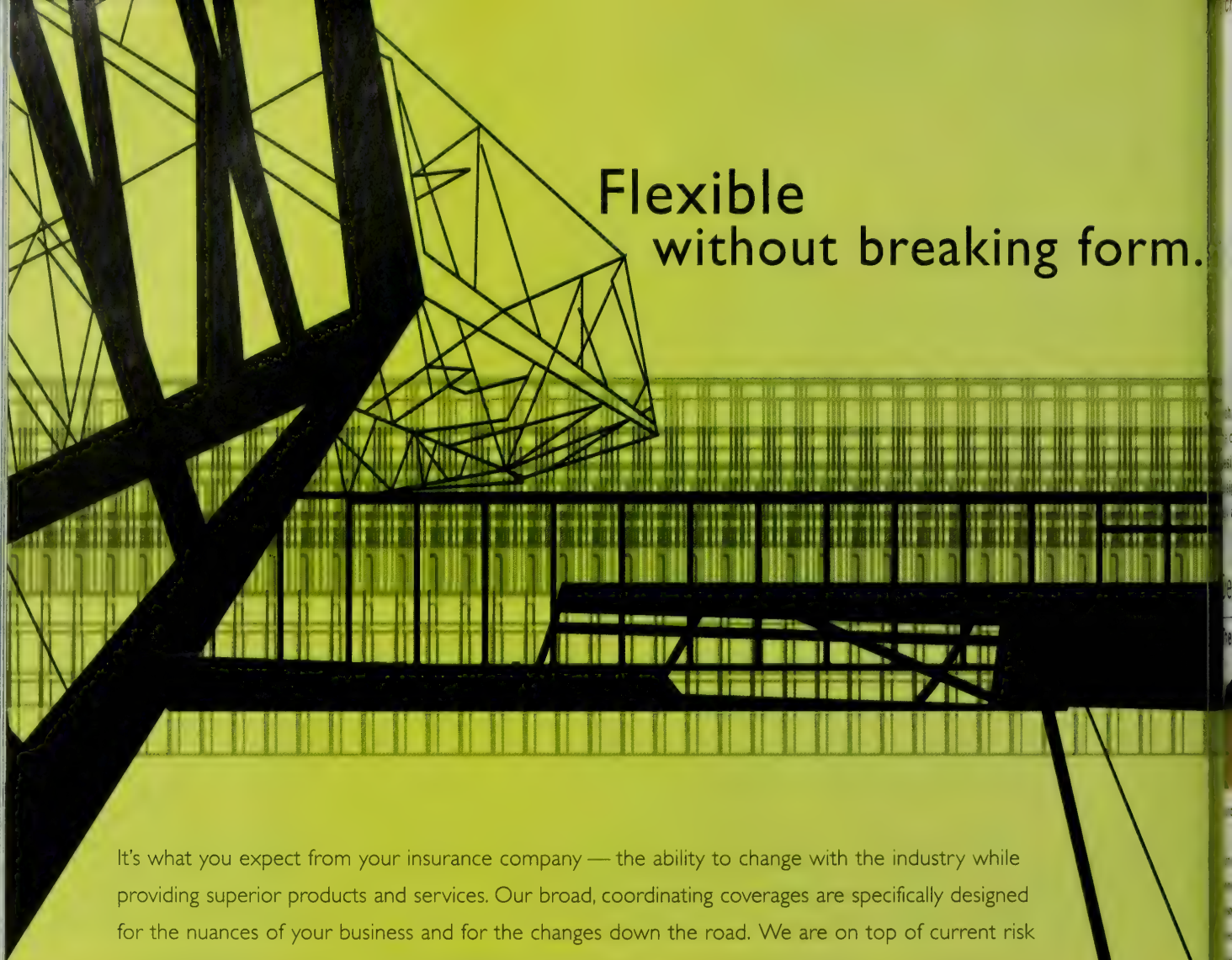
Entrances
Storefronts
Window Walls
Curtain Walls
Operable Windows

YKK AP
your choice | connected | green | your single source

www.ykkap.com
1-800-955-9551

©2005 YKK AP America Inc. is a subsidiary of YKK Corporation of America.

CIRCLE 29 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Flexible without breaking form.

It's what you expect from your insurance company — the ability to change with the industry while providing superior products and services. Our broad, coordinating coverages are specifically designed for the nuances of your business and for the changes down the road. We are on top of current risk management issues with our client-accessible web content and informative seminars. If you have a claim or a worry, we're there with an answer — fast and efficient. You'll know us by our first name because you'll receive personal attention from one of our 30 national claims representatives. Add nearly 50 years of experience and you've got an innovative partner with a unique perspective and someone who will know you and your business for years to come.

For more information or for an application, visit www.PlanetAEC.com or call us at 301.961.9800.

Victor O. Schinnerer & Company, Inc.

CNA

Innovation from Expertise

CNA is a service mark and trade name registered with the US Patent and Trademark Office. The program referenced herein is underwritten by one or more of the CNA companies. This information is for illustrative purposes only and is not a contract. ©2005.

CIRCLE 30 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

For and about the emerging architect

archrecord2

archrecord2 chats with several young architects in New York City who are giving much thought to the different elements that create a style, and rethinking the methods required to achieve it. In Design, we talk to the partners at Miloby Ideasystem and find out how their vision in small-scale design often leads to large-scale projects. In Work, Ben Pell combines the precision of technology and the pliability of leather, and reworks them into an unexpected haute couture.

Design

The Branding of Environment



Miloby Ideasystem stands out from its peers both in its approach and its inspirations. The design firm's projects encompass the fields of architecture, corporate branding, product packaging, and Web design. And Miloby's portfolio varies as much as its two founders, Milana Kosovac and Tobias Lundquist.

Kosovac grew up in Canada, where she studied both economics and architecture. After brief stints with Dominique Perrault, Michael Rotondi, and Frank Gehry, Kosovac worked on set designs for films and music videos. "Set production was a great opportunity to take my background in architectural theory and model-making and use it in the real world," Kosovac says. Kosovac's next role was as creative director of a company that aided the design and development of new consumer products.

Lundquist, born and raised in Sweden, received his architecture degree from SCI-Arc, in Los Angeles. After working in Daniel Libeskind's office, the architect gained experience at large firms, including SCB in Chicago and SOM in New York. "By working at larger firms, I had the opportunity to apply design to large-scale projects," explains Lundquist.

When the partners launched their firm in 2001, they took up residency at the Essex Street Studio [RECORD, January 2004, page 50]—a cooperative workspace for fledgling firms in New York's Lower East Side—and held business hours at night when their day jobs ended. Six months later, however, they found alternate office space and focused completely on Miloby. "It was a sink-or-swim situation," says Kosovac. "Neither of us have jobs in academia, as is often the case at young firms that financially support themselves." The two architects decided to focus their approach on small-scale projects for their clients' businesses.

Kosovac explains, "We're more likely to attract a client through a smaller project, such as creating their business





Launch Studios, New York City, 2005
From the logo to the award-winning Web site design (above) to the funky, unfinished design of the 6,000 square-foot offices (left), the architects seamlessly carry the company's brand across many disciplines.



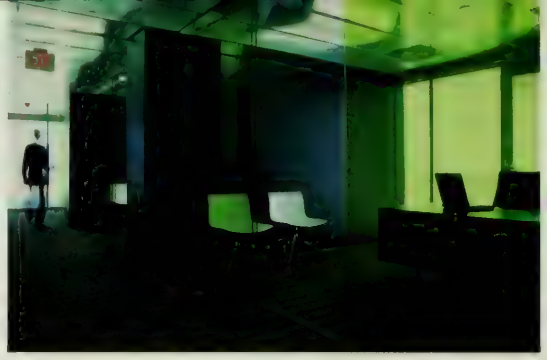
Charlex, New York City, 2001–present
In the midst of their growth-spurt, this postproduction studio turned to Miloby for an image overhaul. The goal is to increase the design element in their public communications while "painting the town Charlex orange."

card. By building on that relationship, we ultimately prove ourselves as designers." Both partners agree that their clients have begun to understand the benefit of having Miloby work on all the elements of a company's public face.

In one instance, the firm was hired to develop the branding of a Manhattan-based firm. The team began with creating the logo and soon were commissioned to take charge of essentially all the media, including print ads, the Web site, and promotional gifts. Within the same year, Miloby was asked to design the company's offices. "They recognize the value of our providing them with continuity and a seamless experience that also extends into their built environment," Lundquist adds.

The duo enjoys the mix of the distinct yet connected disciplines. Lundquist says, "While the technical skill set may vary depending on the project, it still comes down to creating good design." They point out that their urban location is partly the reason for this business plan. "There's a limited amount of new architecture that can be built in the city," says Kosovac, "and rather than do something mediocre or have a firm that specializes in redesigning bathrooms, we want everything we do—in both media and architecture—to be high quality." *Randi Greenberg*





Lucini Italia Company Exec. Offices, Miami, Fla., 2004
The design of these offices re... around the company's flagsh... product—extra-virgin olive... Having worked with the co... since its launch, Miloby has... taken part in its branding, a... tising, new product design, e... trade-show exhibits.



Sante Fe House, Sante Fe, N.Mex., 2001 (left); 28BL, East Hampton, N.Y., 2005 (above)
As with other Miloby commissions, the team's residential architecture stems from the trust and relationship they form with their long-standing clients. The architects design the homes as well as some of the custom furniture created expressly for them.

For more examples of the many disciplines of Miloby Ideasystem, go to archrecord.construction.com/archrecord2/

A New Vision in Fire Rated Walls.



PyroEdge, StileLite, ... and Vision 60 System are registered trademarks of InterEdge Technologies. Pyrobel is a registered trademark of Glaverbel S.A. PYRAN® is a registered trademark of SCHOTT AG (Mainz, G...

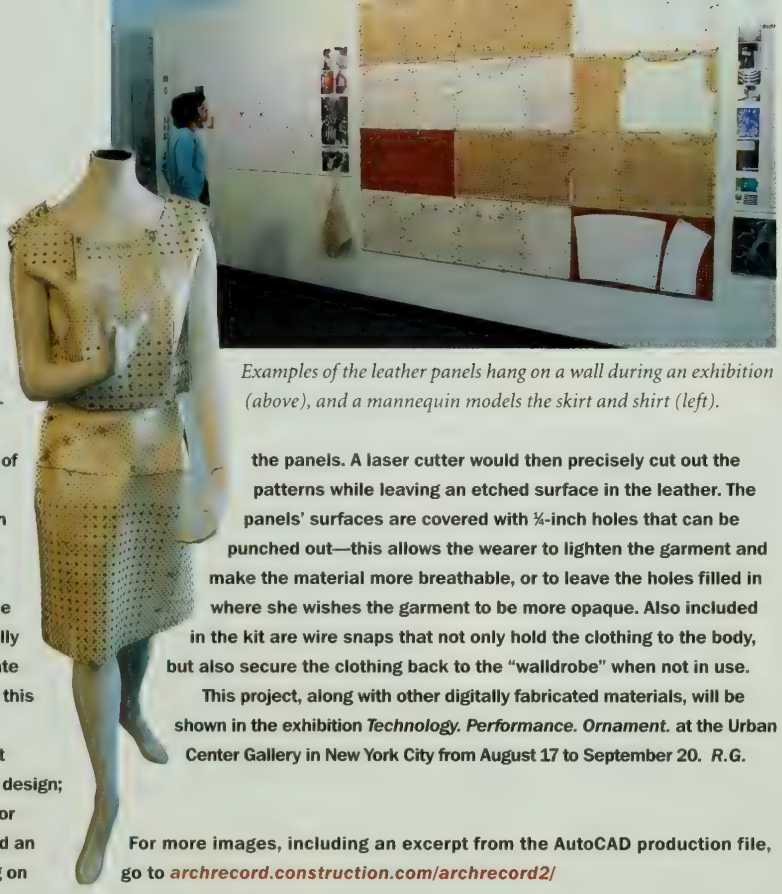
No More Wire Hangers

For many people, the process of getting ready in the morning comes to a screeching halt as they stand in front of their closet perusing their wardrobe and trying to figure out what to wear. Ben Pell wants to change that—or at least the setting. Enter Walldrobe/Wearpaper, a clothing system that is tailored by digital fabrication technologies and, when not being worn, hangs on the wall as flat, abstract-patterned wallpaper.

Pell, who at the time was an assistant professor at Syracuse's School of Architecture, along with his graduate assistant, Theo Grothe, began to explore this fashion overhaul as a research project fully funded by the university. "My research involves architectural effect," says Pell. "I'm interested in the ways that architecture, or fashion or design of any sort, engages the environment."

Another of Pell's interests lies in the unaccustomed uses to which new technologies can be applied. In this project, the architect is especially focused on the proliferation of computer-aided design/computer-aided manufacturing (CAD/CAM) in the production of architecture. While architects like Frank Gehry and Greg Lynn use the technology principally to create complex forms, Pell is interested in CAD/CAM's ability to create more practical forms. "I'm also looking at how to use the limitations of this technology as potential and not as a roadblock," Pell explains.

Pell perceived the correlation between CAD/CAM—a program that employs patterning concepts—and the pattern-based craft of clothing design; hence Walldrobe/Wearpaper was born. In the Walldrobe kit (available for women's sizes 6, 8, and 10), one would receive 12 panels of leather and an AutoCAD file that arranges the patterns of selected articles of clothing on the panels. A laser cutter would then precisely cut out the patterns while leaving an etched surface in the leather. The panels' surfaces are covered with ¼-inch holes that can be punched out—this allows the wearer to lighten the garment and make the material more breathable, or to leave the holes filled in where she wishes the garment to be more opaque. Also included in the kit are wire snaps that not only hold the clothing to the body, but also secure the clothing back to the "walldrobe" when not in use.



Examples of the leather panels hang on a wall during an exhibition (above), and a mannequin models the skirt and shirt (left).

This project, along with other digitally fabricated materials, will be shown in the exhibition *Technology. Performance. Ornament.* at the Urban Center Gallery in New York City from August 17 to September 20. *R.G.*

For more images, including an excerpt from the AutoCAD production file, go to archrecord.construction.com/archrecord2/

PyroEdge™ Glazing

Pyrobel™ Glazing

PYRAN® Star

PYRAN® Crystal

StileLite™ Frames

HighLite™ Frames

Vision 60 System™

Introducing the newest solution in fire rated glazing from InterEdge!

Imagine an entire fire rated wall uninterrupted by vertical framing! The Vision 60 System is just that—a fully glazed 60-minute transparent wall with no intermediate framing. Each panel of Pyrobel-60 fire rated glazing is separated by a slim silicone caulking, offering truly free and open vision for your projects. With numerous framing options available, this system is ideal for transportation facilities such as airports, retail centers, commercial office buildings, hospitals, schools and any other location where uninterrupted viewing is desired. Take your projects from ordinary to spectacular with the Vision 60 System!

For the most up-to-date information on our entire suite of fire rated solutions, including maximum glazing sizes, framing details, CSI specs, and project photos, please call us at **1.877.376.3343** or visit us online at **www.firesafe-glass.com**.

INTEREDGE TECHNOLOGIES
An AFG Glass Company

AFG GLASS

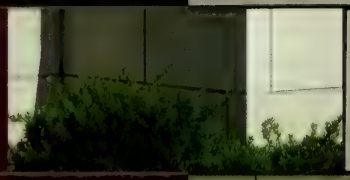
CIRCLE 31 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

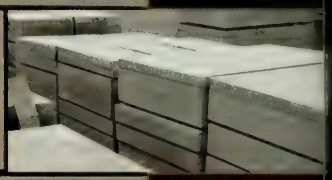
Vision for Life. Vision for Safety.
Fire Rated Glazing Solutions for All Your Visions.

LIMESTONE CLASSICS SERIES™

Real Indiana Limestone in a new modular veneer priced to compete with cast stone.







- Same source of raw material used in our nation's most renowned buildings
- Natural durability and high quality
- Wide range of trim units available
- Precision cut in cost-effective and versatile modular units
- The Classic Complement to brick and other building materials
- Readily available

Vanderbilt™ CLASSIC

Choose the classic beauty and durability of Indiana Limestone building veneers. Call **800-457-4026** or visit **IndianaLimestoneCompany.com**

INDIANA LIMESTONE COMPANY

IndianaLimestoneCompany.com

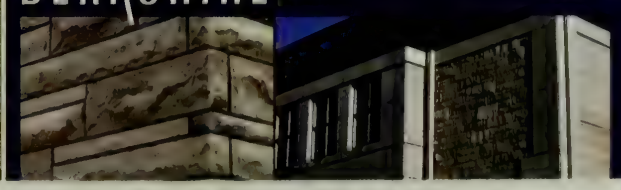
OTHER INDIANA LIMESTONE CLASSICS VENEERS AVAILABLE

ROCKFORD™



■ A richly textured, lightly tumbled natural Indiana Limestone. The Classic Complement to brick and other materials that adds beauty and value.

BERKSHIRE™



■ Full color blend, random length split faced Indiana Limestone veneer. Timeless beauty of natural stone with an ease of installation.

CIRCLE 32 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Finding a dramatic home for a political football

Critique

By Michael Sorkin

After years of promoting a West Side stadium for football and the Olympics, the Bloomberg administration—stung by the defeat of its plan in Albany—quickly regrouped and proposed to build in Flushing Meadows, Queens, piggybacking an Olympic facility on a new Shea Stadium for the Mets. The new site is vastly superior in practically every way: public transportation connections, automobile access, and adjacency to other sporting venues. And, unlike the West Side location, which would have required construction at public expense of a huge platform over an active rail yard, the Queens site is largely parking lots.

Mayor Bloomberg was wistful in giving up the West Side, however, claiming that his tenacity in defense of the site was largely motivated by its spectacular relationship to the Manhattan skyline, visual drama he thought apt for the Olympics. While the location was ridiculous from virtually every other perspective, this idea was not. An honorific gathering place for large-scale public events—such as the Olympics, football, rock concerts, political rallies—does suggest a compelling locale.

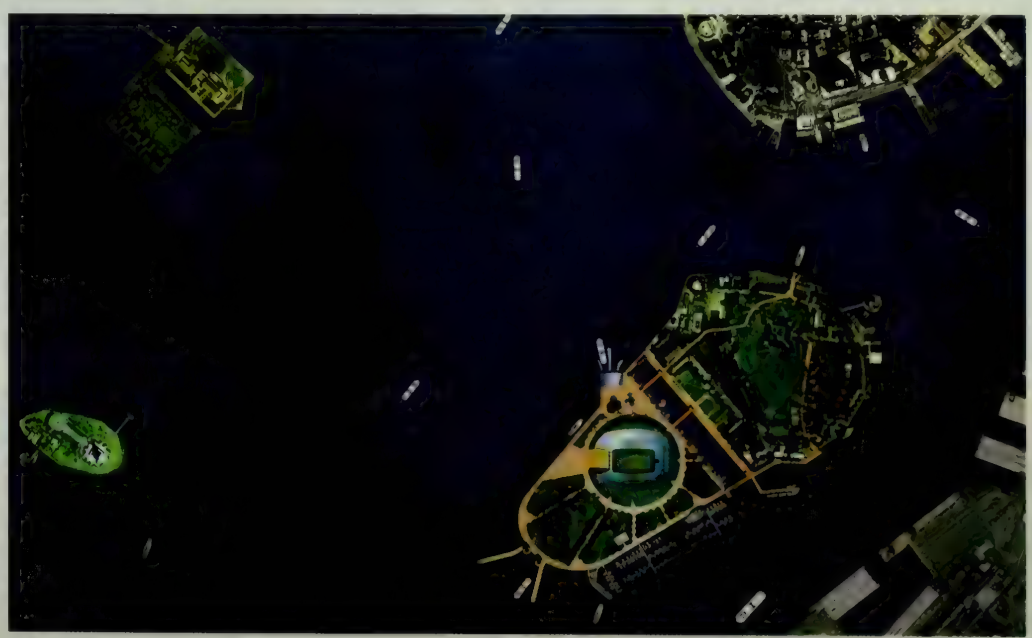
This city offers no site more suited to the task than Governor's Island. Sitting in the middle of the harbor opposite the Lower Manhattan skyline, East River bridges, the Statue of Liberty, and Ellis Island, the former military base (holding, among other things, two spectacular War of 1812–vintage fortresses) awaits a new use and is currently in the midst of a developer-focused Requests-for Expressions-of-Interest process. This narrow, real estate–driven approach is depressing. The city has certain assets of such transcendent value that ideas of use must precede financial strategies to realize them.

A double-island design

After conducting an analysis of 10 alternative sites for the proposed stadium, my studio and I reached a double conclusion: The Flushing site is the most logical from the point of view of existing infrastructure, but Governor's Island is the most spectacular. And so we decided to work on a scheme to see what a harbor stadium there might look like. The first decision was to split the island in two with a new canal. This is not unprecedented. Until the early 20th century, the island was approximately one third its present size. It grew only when contractors dumped fill from the excavation of the IRT subway line. As a result, all of the island's historic architecture lies on its older, northern section, and this would remain in our scheme.

The double-island configuration accommodates a double use, and our proposal calls for the stadium, a public park, and a marina on the southern island, and a United Nations enclave on the northern one, with the conversion of the existing Fort Jay into a "diplomatic arena," a location for intense negotiations over the beating of swords into plowshares. This doubling into an island of free assembly and an island of peace is intended to carry apt symbolic weight. Indeed, given the floundering plans for Ground Zero and the largely commercial program proposed for it, these uses seemed especially meaningful to both time and place.

In analyzing the suitability of the site for large-scale gatherings, the primary issue is that of transportation; the island is currently accessible only by water. In many ways, this is crucial to the compelling character of the place, which stands dramatically apart from the city. A visit takes one to another world of greenery, views, and



The stadium would reside on Governor's Island, with Manhattan to the north and Liberty and Ellis islands to the west.

Contributing editor Michael Sorkin runs the Michael Sorkin Studio and is the director of the urban design program at the City College of New York.

breezes—a purely pedestrian realm. This isolation has an additional useful aspect in assuring the security of the site, an issue that is inescapable for both of the intended uses. For everyday purposes, existing docks and ferry systems are essentially adequate, with only small modifications needed to allow berthing and drop-offs on both islands and to provide dedicated service to U.N. headquarters in Manhattan.

The major traffic generated by games and events—which might attract as many as 70,000 people—would require additional means of access. Primary among these would be the construction of new slips capable of docking the existing Staten Island ferry, which sails across a narrow channel from South Ferry at the southern tip of Manhattan. Deployed as a shuttle on game days (typically on the weekend when the ferry schedule is dramatically reduced), these huge vessels could easily transport the necessary numbers in an hour. This movement might be further assisted by the construction of a pedestrian bridge over Buttermilk Channel to Red Hook in Brooklyn, where parking and bus connections could be provided. And new lots here would logically network with others—in New Jersey, Flushing, Staten Island—and link to Governor's Island via smaller ferries.

Energy independence

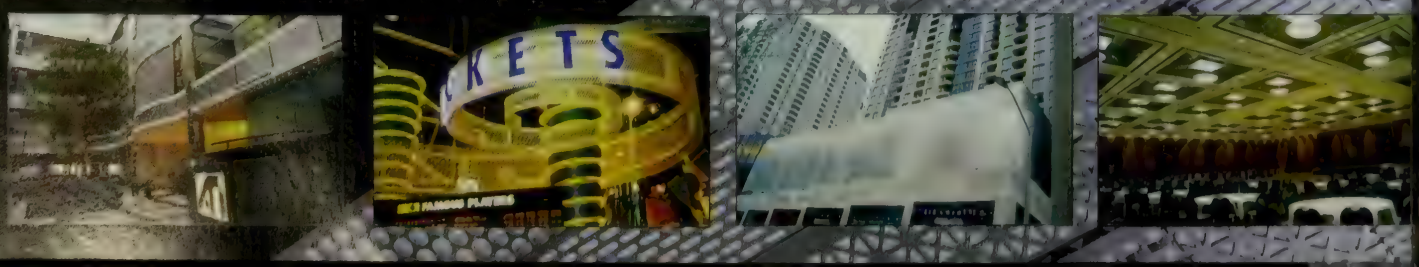
The stadium itself would be located within a craterlike earth berm, constructed from the fill re-excavated to form the canal. Covered in greenery, the berm would minimize the impact of such a large piece of architecture in this very visible place, blending it with the parks that would surround it. The dominant visual element would be a large wind farm that would form a stately and kinetic field of objects. Joined with a system of tidal generators in adjacent Buttermilk Channel, these windmills would form a system robust enough to supply all the energy for the two islands. This assertion of complete energy independence is intended not simply to attenuate demands on an overloaded system but to address one of the principal factors in America's international political crisis.

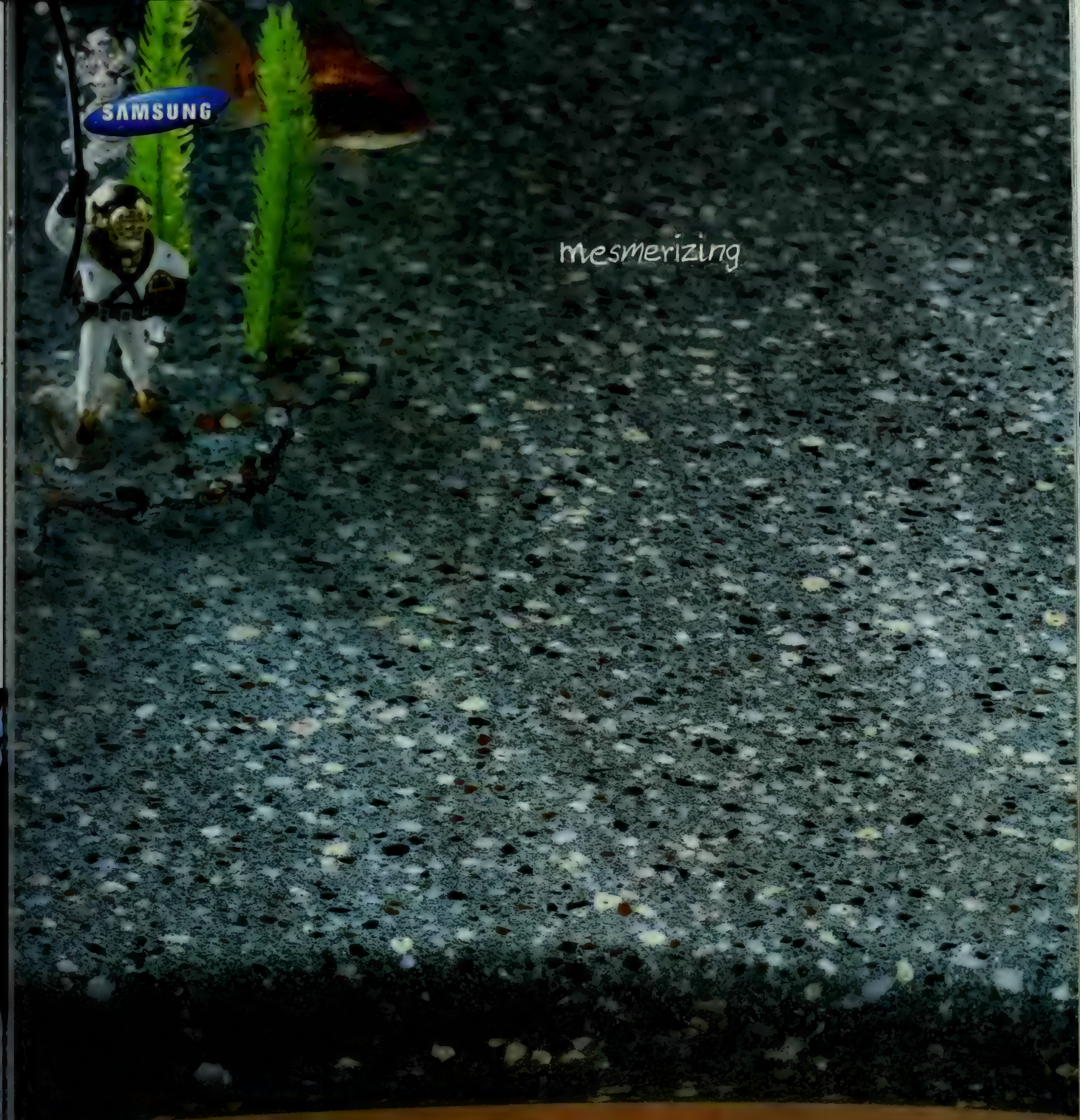
Now that the International Olympic Committee has selected London to host the 2012 games, what better way of priming the pump for New York's 2016 bid than by offering this utterly spectacular site? And the Jets still need a home. ■



The stadium could serve as a bright symbol of free assembly in the same harbor as the Statue of Liberty.

ESP
Energy Steel Products Inc.
A Subsidiary of Samuel Manu-Tech (U.S.) Inc.
Stocked in Stainless, Galvanized, Aluminum,
Cold Rolled and HRPO, in a full range of thicknesses.
Toll Free: 1-888-377-4317
www.energysteelproducts.com
E-mail: houston@energysteelproducts.com
Perforated Metal
SYSTEM CERTIFICATION ISO 9001:2000 SGS
CIRCLE 33 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





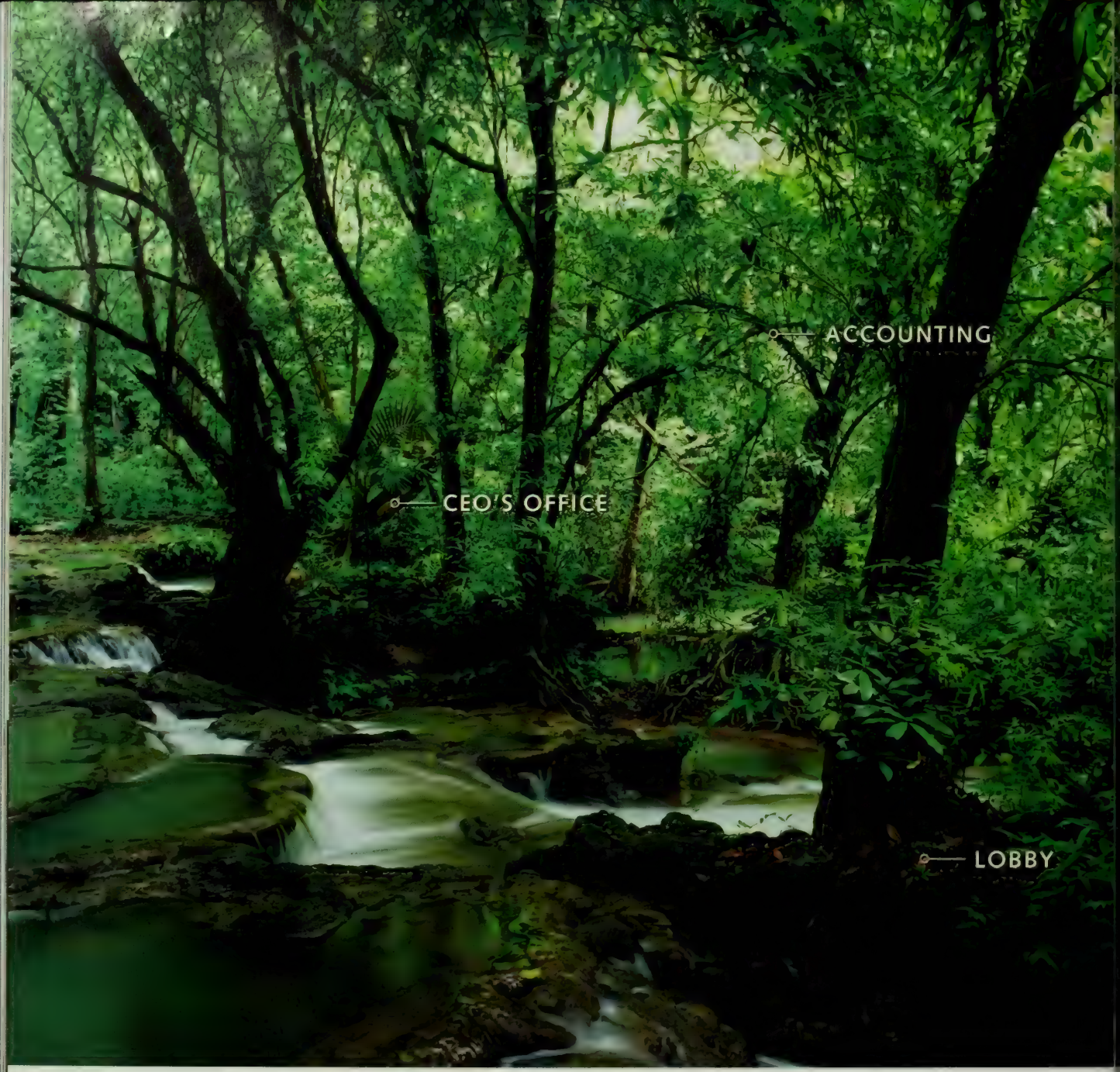
STARON® THE SOLID SURFACE MATERIAL BY SAMSUNG, OFFERS A COLOR SELECTION WITH GREATER DEPTH. With nine new colors in 2005, Staron offers designers more than 50 choices to complement any residential or commercial project. Staron is also a value that leaves room in a budget for other key upgrades. For more in-depth information about Staron countertops and sinks, visit **www.getstaron.com/design3** or call **1.800.795.7177 ext. 350.**

COUNTERTOP | QUARRY MALLARD

staron

© 2005 Cheil Industries Inc. Staron has been certified by NSF International under its NSF51 rating for food zones.

CIRCLE 34 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



IF THE COLOR'S OUT THERE, WE CAN HELP YOU BRING IT IN.

It's time to explore color beyond the color chip. And Sherwin-Williams can help. With our fast, accurate exclusive Sher-Color™ computerized matching system, we can give you virtually any hue in the world. Whether you find it out in nature or hidden away in an office drawer. And with our online Color Visualizer and COLOR *To Go*™ paint sampling system, you can show your clients exactly what to expect for added color confidence. In other words, when you work with Sherwin-Williams, getting the perfect color really is a walk in the park. *To learn more, see your Sherwin-Williams Architectural Account Executive or call our Architect & Designer Answerline at 1-800-321-8194.*

SHERWIN WILLIAMS.

CIRCLE 35 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Snapshot



A Cor-Ten-steel sound-attenuation wall (right) sweeps off the ground, morphing into a footbridge (below) that frames the Melbourne skyline.



By Beth Broome

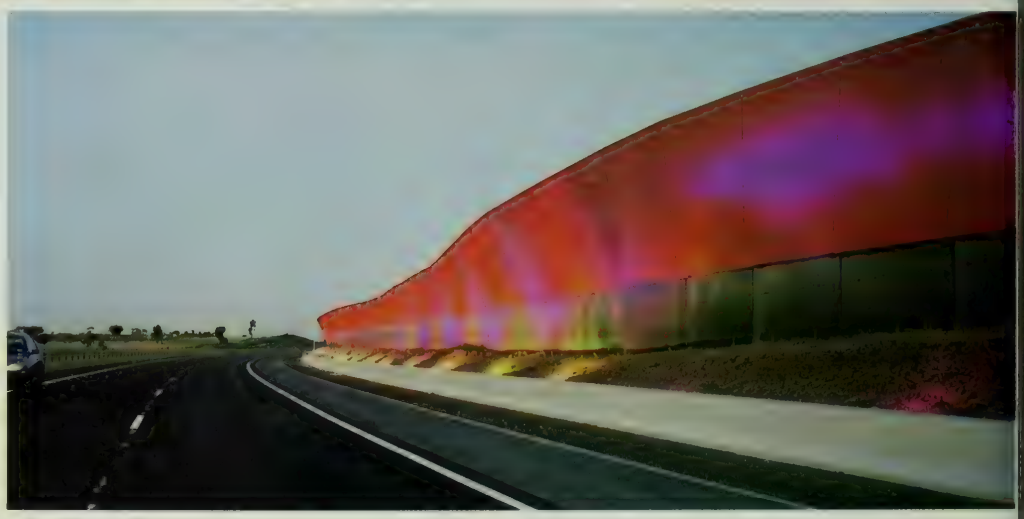
A souped-up bypass is a destination in its own right

When congestion on the Hume Highway, which runs between Melbourne and Sydney, reached a peak, the Australian federal government, in delivering a new freeway connection, called a competition to design a gateway element with noise-attenuation features. The Craigieburn Bypass, the result of that competition, draws on the suburban vernacular and the transforming power of speed to create a dramatic new entryway for the city of Melbourne.

Named for the suburb it skirts, the bypass was designed by Melbourne-based landscape architects and urban designers Taylor Cullity Lethlean (TCL), in collaboration with Sydney-based architects Tonkin Zulaikha Greer and sculptor Robert Owen. Half the project was completed in 2004, with the remaining section scheduled to open at the end of 2005.

Approaching Melbourne on the bypass, the motorist first encounters a half-mile-long ribbonlike curtain wall made of 18-foot-high Cor-Ten-steel panels cantilevered off a concrete base. Soon, the wall appears to break free of the ground and rises, morphing into a single-span pedestrian bridge that frames the city's skyline. Beyond the bridge, the concrete base continues its path and the wall evolves into an acrylic-paneled scrim, half of which is sandblasted, making it translu-





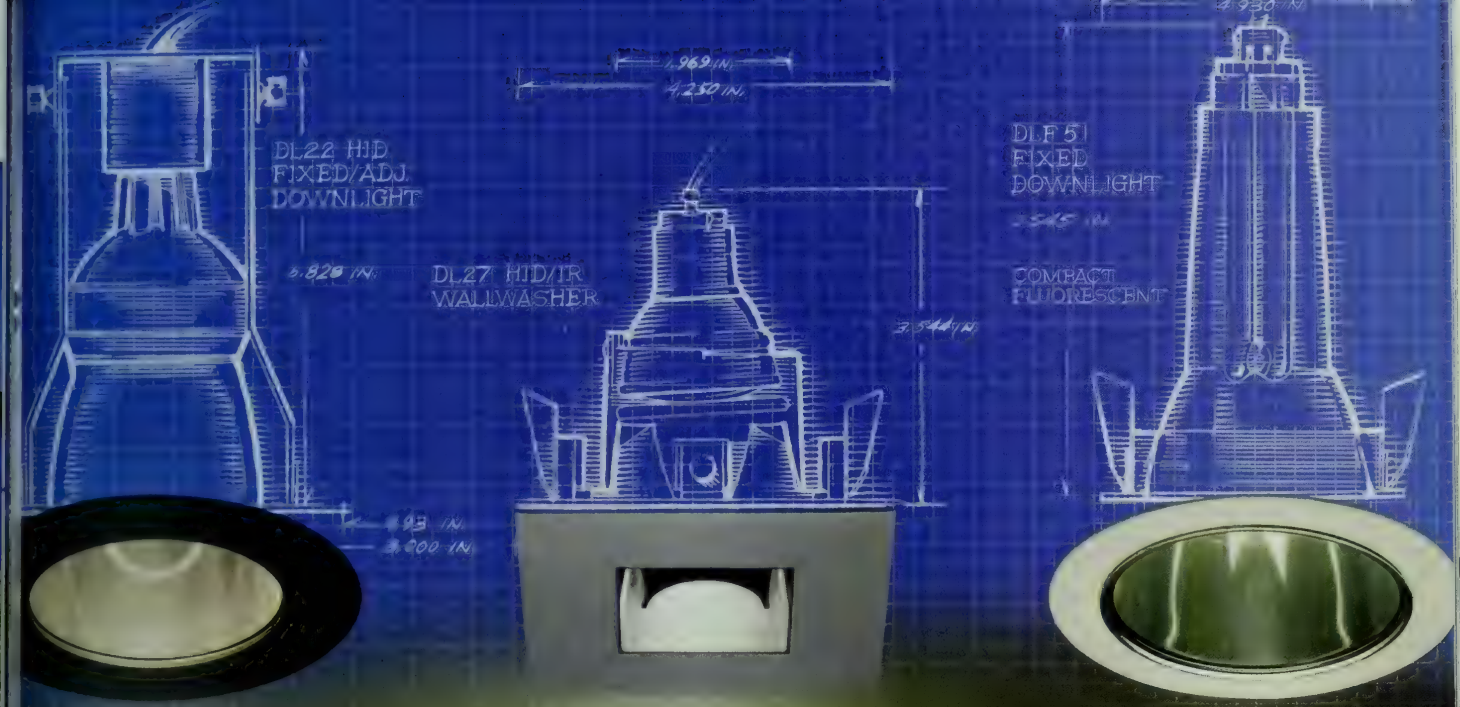
Torqued louvers rise above an acrylic scrim wall (above) and accentuate the feeling of speed for the passing motorist. The illuminated curtain wall (right) also depicts movement.

cent. Blue concrete louvers are planted in front of the scrim wall at 13-foot intervals and are rotated in plan 5 degrees.

Mimicking the adjacent homes, where curtains, lace screens, and louvered blinds are visible through the windows, the scrim walls and louvers "were born from the idea of exploring the vernacular materials of the suburb and how a wall design could be a reflection of its environment," says Scott Adams of TCL. Additionally, the design is an exploration of how static objects exhibit dynamism with speed. The angling of the curtain wall and the spacing and rotations of the scrim wall's louvers were carefully calculated to create the illusion of movement for the driver.

The bypass also celebrates its function through its lighting techniques. A section of the scrim wall, which is illuminated by fluorescent lights, harbors LED fittings that form a giant screen. Sensors in the road that react to the flow rate of traffic trigger the screen, causing the wall to become an informed reflection of the road environment at night.

Rather than offering a simple solution to a common problem, the Craigieburn Bypass not only provides a dynamic new approach into Melbourne, but also reveals the design potential of highway infrastructure—one of the essential yet often overlooked features of the built world. ■



idden beauty: not just another pretty fixture.

The artistry behind Lucifer's new downlights has created function that is as beautiful as the form. Accepting HID, CFL, and IR lamps, these low profile fixtures make energy efficiency a creative opportunity with louvers, lenses, and baffles that allow light to be tuned for a variety of effects. Lucifer downlights: beautifully designed, elegantly engineered, and exceptionally efficient.

LUCIFER
LIGHTING COMPANY

CIFER
HTING
25th
IVERSARY

800.879.9797
luciferlighting.com

Tuneable Lighting

CIRCLE 36 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Stretch your imagination.

Tensioned membrane structures from Taiyo Birdair give your designs a whole new dimension.

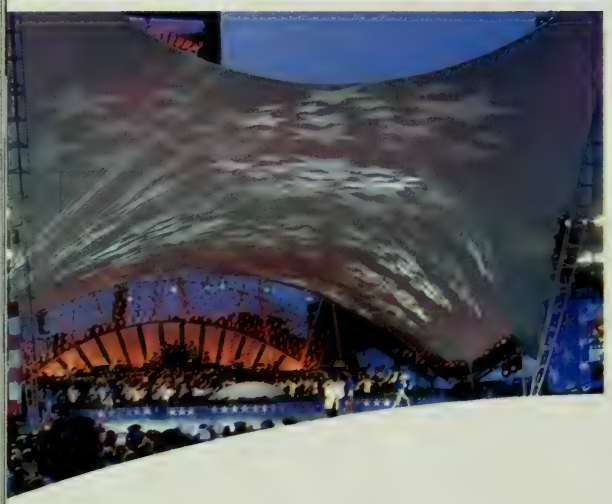
Your Imagination





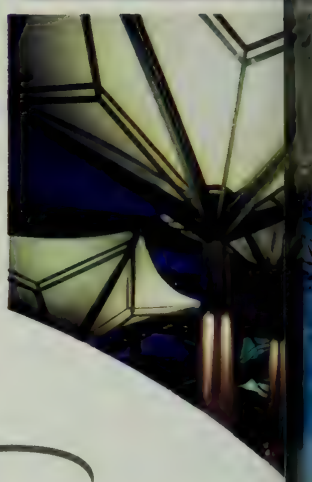












Our Technology

Taiyo Birdair has complete design/build resources for tensioned membrane and lightweight roofing systems.

Whether your vision is a world-class sports stadium, a stunning retail complex or an innovative museum concept, we can help you create tensile architecture, large and small, like no one has ever imagined.

We'll work with you and your clients to turn your ideas into a beautiful, strong, and long-lasting structure.

Contact us today for more information.

TAIYO BIRDAIR

Mak/Fax

maximizing membrane

Taiyo Birdair Corporation

800-315-4842 / 716-204-1234

Fax: 716-204-1236

Email: sales@taiyobirdair.com

www.taiyobirdair.com

CIRCLE 37 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



LATICRETE

We Innovate, Others Imitate.

LATICRETE® 9235 Waterproofing Membrane

For nearly 50 years construction professionals worldwide have trusted their most critical installations to LATICRETE.

We invented thin, direct-bondable, load bearing membranes and LATICRETE 9235 Waterproofing Membrane maintains its #1 position due to extraordinary reliability, ease of use and value. 9235 has been selected for use on hundreds of thousands of installations around the globe in pools, spas, plazas and decks, kitchens and bathrooms.

Your reputation is on the line with every project you install. Doesn't it make good sense to continue to place your trust in a proven innovator?

To receive your FREE LATICRETE 9235 Waterproofing Membrane Swatch Sample call 800-243-4788, Ext. 989 or log on to www.laticrete.com.

LATICRETE

LATICRETE INTERNATIONAL, INC.
(800) 243-4788, EXT. 989
www.laticrete.com

©2005 LATICRETE INTERNATIONAL, INC. LATICRETE, LATAPOXY and the logo are registered trademarks of LATICRETE INTERNATIONAL, INC. A-1441-0505

CIRCLE 38 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/







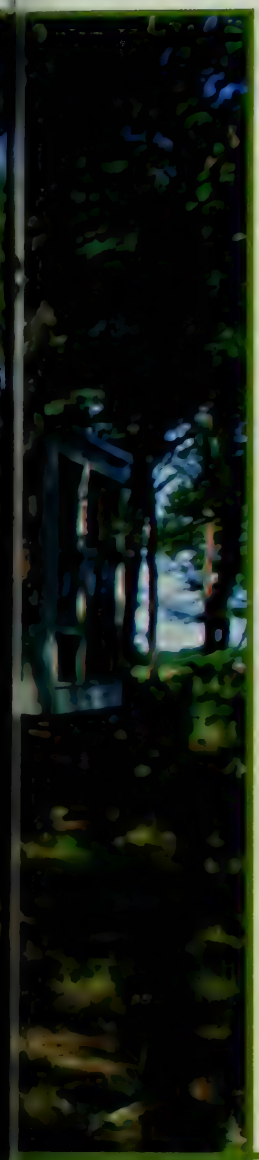
Saving the Early Modernist Cottages of Cape Cod

Photography by Norman McGrath

By Mildred F. Schmertz, FAIA

It is not widely known, except among New England's architectural preservationists, that a collection of little Modernist summer houses built of wood lies within the boundaries of the Cape Cod National Seashore. At the end of World War II, on the stretch of land between Truro and Wellfleet on the Outer Cape, leading international architects Marcel Breuer, Serge Chermayeff, and the Boston architects Nathaniel Saltonstall and Oliver Morton began building thoughtful and inventive Modernist houses for themselves and clients. Other good, if less-well-known New England architects began to do the same. There are at least 20 of these houses still extant; more, if the criteria for determining aesthetic and historic importance are not too rigorous. For several reasons, these houses are an endangered species, but they are not without friends, including most importantly the Massachusetts Historic Commission and DOCOMOMO, the international organization dedicated to the study and preservation of the built legacy of the Modern movement.

The Cape Cod National Seashore was created by legislation sponsored by President John F. Kennedy and signed into law in August 1961. The Atlantic-facing outer beach, known locally as the "back shore," runs northward an unobstructed 40-miles or so from Chatham all the way to



Wise Cottage

The Wise Cottage is a revised version of Marcel Breuer's first Wellfleet home (1943–48). Low posts support the house, suspending it within its pinewood setting.



Mildred F. Schmertz, FAIA, is a former editor in chief of ARCHITECTURAL RECORD.









Provincetown. Then, heading south, the National Seashore follows Cape Cod Bay. The park owns little on the bay side, with the exception of a portion of Wellfleet. Between Truro and Wellfleet it connects the ocean side to the bay side. The park comprises 27 thousand land acres that include beautiful beaches and back woodland roads and trails that are for the most part open to the public.

September 1959 was the cutoff date for all new construction within what were to become the park boundaries. Up to then, about 600 homes on privately owned land had been built. Those who built between 1959 and 1961 were forced to sell their property to the park. The government offered sellers the option of taking less money in exchange for a 25-year lease; once the lease was up, the property would return to park control.

ALL BUT THREE OF THE 20 HOUSES ARE PRIVATELY OWNED AND AT RISK OF BEING SOLD AS TEARDOWNS.

What makes these 44-year-old public/private environmental and recreational arrangements of interest today is their effect on preservation issues. All but three of the 20-odd houses are privately owned and at risk of being sold as teardowns because of the ever-increasing value of the land they occupy. The exceptions include the Thomas Kuhn Cottage designed by Saltonstall and Morton and the Hatch Cottage by Jack Hall. Both were built after the cutoff and are owned, therefore, by the National Seashore. A former wife of the late Paul Weidlinger, one of the most distinguished structural engineers of his day, donated the third residence to the park.

The preservation story of these three houses is at present one of partial success, and it begins with the efforts of preservationist Gina Coyle with the aid of DOCOMOMO. Coyle's transformation from a year-round house sitter to a leading advocate for the continuous existence of three small Modernist houses on the Outer Cape began when she was asked by Sarah Kuhn to look after her late grandparents' house. Its ownership had outlived the 25-year lease option, but Kuhn continued to occupy the house in the summertime on a yearly lease basis. This arrangement had become more and more untenable because she did not wish to continue to maintain a house that she believed would be torn down once the National Park Service (NPS) laid claim to it. By the time Coyle began to live there, it was in serious disrepair, and it was then that Kuhn chose not to renew the lease and was told to vacate.

Wexler Cottage

"For our compound and the Wexler Cottage (opposite four)," recalls Serge Chermayeff's son Peter, "my father introduced a new way of using Homasote panels for insulation. Because they could be simply nailed onto a stud wall, it was a light and inexpensive way to build. He used them inside, as well, making a sandwich. He cross braced these walls with X-frames and liked the triangular patterns they made."

Chermayeff Compound

Serge Chermayeff's Wellfleet summer home continues to be used by his sons Ivan and Peter and their families. According to Peter, "It all began with the purchase of a little cottage (opposite, top left) that had a hand pump, a kerosene stove, and a privy." By 1952, Chermayeff had renovated the interior and built a studio and guesthouse (opposite, bottom right). Another addition was later made (opposite, bottom left) that provides a large, skylit living room (opposite, top right).

Though it leaked and sagged, Coyle had come to love the house for its economy, simplicity, and carefully studied relationships with the surrounding wooded landscape, so she set out to persuade the NPS, under its ownership, to repair and preserve the house for an appropriate use she had in mind. To further her case, she made a survey of 20 Modernist cottages on the National Seashore and documented them to demonstrate that the Kuhn property was not a singular phenomenon but a very important segment of New England's architectural culture. And she extended her fight to include the Hatch and Weidlinger houses as well.

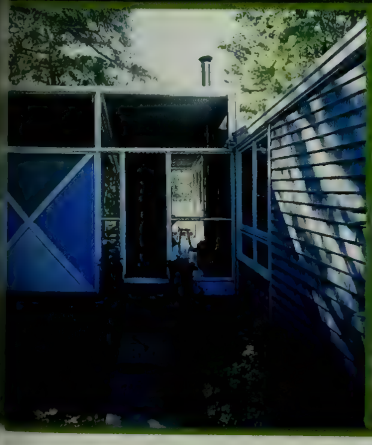
THE COTTAGES DEMONSTRATE ECONOMY, SIMPLICITY, AND STUDIED RELATIONSHIPS WITH THE LANDSCAPE.

Bill Burke, the National Seashore's historian, admits that in spite of Coyle's efforts, he and his colleagues initially believed the three houses were not historically significant. "But we consulted with the Massachusetts Historical Commission as we are required to do by law before we tear anything down," he says. "The Commission told us that we were wrong; the houses were indeed of historic importance, and they had their reasons." It became the NPS's responsibility to take care of the three houses and, for their protection, keep them occupied.

Today, the Kuhn house has a new rubber-membrane roof and is used in the summer as a residence for graduate students doing scientific work in the park. Ruth Hatch still leases her house from the National Seashore on a yearly basis and will be allowed to live there every summer for as long as she wishes. "When the time comes," explains Burke, "the immediate concern for the Hatch house will be to keep it well maintained and occupied during the summer months. The park is certainly open to the options of an individual lease, or for a nonprofit use of the house." Burke reports, however, that plans for the Weidlinger house are still uncertain, as it has major maintenance needs that the NPS must yet address.

While it is clear that the National Seashore can and will protect the historic houses it owns, the privately owned houses remain endangered. David Fixler, AIA, president of DOCOMOMO US/New England explains: "The problem is what real estate is worth now. Some of these houses were built for $5,000 when the land was worth $500. Multiply all that basically by a factor of one thousand. Let us say a little one-room Modernist cottage sells for $750,000. Anyone who has spent that much money on a house doesn't want it to stay a little one-room cottage, so this is the dilemma we are facing." DOCOMOMO has studied possible strategies, including the creation of historic districts.















Hatch Cottage

This little, flat-roofed house by Jack Hall on the Outer Cape's bay side enjoys magnificent views of the beach, protected from further development by the dictates of the National Seashore. While it has survived over 40 years' worth of coastal storms, today it is much in need of maintenance. The walls, framed in wood and covered by vertical siding, are interrupted by plastic-sheeted window openings. At the end of summer, these openings are shuttered by hinged wooden panels that are lowered from the roof frame.

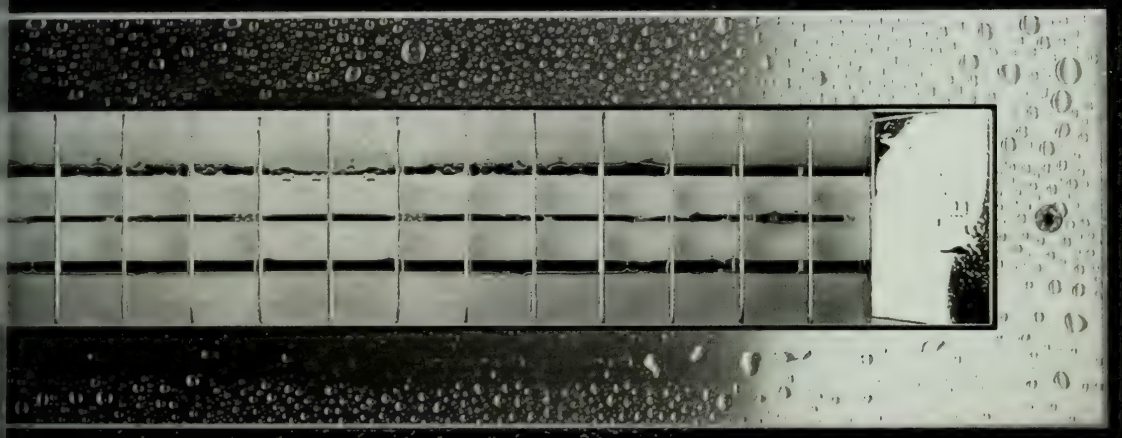
Unfortunately, as Fixler points out, these houses are not clustered and, in fact, are totally unconnected: "It takes the better part of the day," he notes, "to drive from one to another because of the narrow dirt roads. When you are in any one of these houses there is no immediate physical sense of the presence of others."

Fixler has come to believe that the best guarantee for any kind of preservation is strong local support. It is more important, he claims, than a National Register or a State Register approval. And it helps if the house was designed by an architect of the stature of Breuer or Chermayeff, can honestly be deemed as a truly significant work of mid-20th-century Modernist architecture, and given landmark status on its own. And sometimes a completely unprotected iconic Modernist house can be saved even after it is purchased for a teardown. Fixler cites a house by TAC in Newton, Massachusetts. When the new owners applied for a permit to demolish the house, Fixler relates, the city of Newton sat up and told them they could not do it, used an existing demolition delay ruling to slow them down, and gathered public support to successfully save the house.

SOME PRESERVATIONISTS WARN AGAINST TREATING THE COTTAGES AS STATIC WORKS OF ARCHITECTURE.

Fixler advises preservationists to bring all the ammunition they can. "You may not have an ironclad legal case," he points out, "but sometimes there is just enough local incentive and local pressure so that people realize it is just not in their interest to tear the thing down. But there is no hard-and-fast approach." Fixler believes strongly that Modernist houses should not be treated as static works of architecture, and if you buy one you don't have to correctly restore it as you would an Early American house. He argues that it is essential to convince buyers that it is possible to double the size of a house while making it appear to be what it actually is, a recognizable piece of its original architectural era with contemporary additions. "If you can't do that with these houses, then they are toast," Fixler warns. "Given the land values, people are going to want a house that they can make a little more luxurious. People think we preservationists are saying you must keep an architecturally historic house the way it is. This is a peculiar notion that we must disabuse ourselves of." And the sooner the better if the public is to learn how amenable to enlargement these mid-20th-century Modernist houses can be made to be. ■

Drive over luminaires with compact fluorescent light sources



BEGA sets the standard

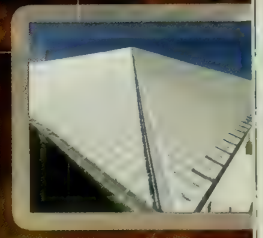
For complete product information
go to www.bega-us.com
805.684.0533

Circle No.
149


INSPIRE
For career opportunities, please
www.hdrinc.com/architects
AAP/EOE M/F/D/V
HDR
NE COMPANY | Many Solutions
CIRCLE 39 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Passion for Perfection





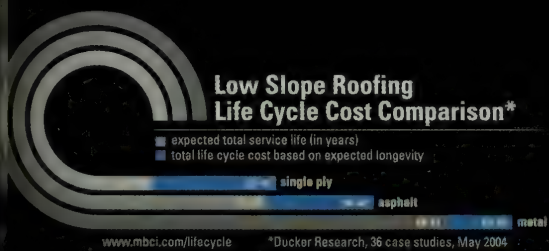


Your passion is design. Our passion is metal.
That's why we make and fully warrant
the world's finest metal roofing systems.

When you're designing your masterpiece,
spec a roof with the performance
that's suitable for your level of perfection.

MBCI makes metal easier. The rest is up to you.

Project: Lester E. Palmer Events Center, Austin, TX
Architects: Barnes Gromatzky Kosarek Architects, Austin, TX
Alan Y Taniguchi Architects & Associates, Austin, TX
Centerbrook Architects and Planners LLC, Centerbrook, CT
Roofing System: MBCI SuperLok®



www.mbci.com/lifecycle *Ducker Research, 36 case studies, May 2004

MBCI

www.mbci.com
MBCI locations to serve you

Houston, TX (877) 713-6224 • Adel, GA (888) 446-6224 • Atlanta, GA (877) 512-6224 • Atwater, CA (800) 829-9324
Dallas, TX (800) 653-6224 • Indianapolis, IN (800) 735-6224 • Lubbock, TX (800) 758-6224
Memphis, TN (800) 206-6224 • Oklahoma City, OK (800) 597-6224 • Omaha, NE (800) 458-6224
Phoenix, AZ (888) 533-6224 • Richmond, VA (800) 729-6224 • Rome, NY (800) 559-6224
Salt Lake City, UT (800) 874-2404 • San Antonio, TX (800) 598-6224 • Tampa, FL (800) 359-6224

CIRCLE 40 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

By Sam Lubell

There it is, looming behind a sea of asphalt, heat waves blurring its behemoth form as if it were a mirage. It is perhaps the most hated form in architecture: the big-box store—the cheap, profit-driven megastructure fabricated with thousands of concrete masonry blocks and little imagination. The building type has been blamed for disfiguring towns across the country and subjecting shoppers to bland, titanic structures with depression-inducing interiors.

Fed-up communities have steadily increased the number of regulations on the big box, and in the past two years their efforts have begun to yield impressive results. Some of the newest stores are surprisingly well designed. Retailers and developers, too, have recently upped their design efforts in response to local backlash, trying to meet customer demand for higher-quality environments and to work their way into new markets such as urban areas, lifestyle centers, and malls. New stores incorporate glass facades, integral landscaping, varied massing, natural lighting, easily navigated interiors, stacked parking, facades that abut the street, and sustainable features like photovoltaic panels. Of course, adopting such ideas on a large scale will not be easy. The stores exist in their form for a reason: They are extremely cost-efficient and convenient to build. Trying to reshape them while pleasing consumers' and companies' bottom lines will no doubt be a challenge almost as gargantuan as the stores themselves.

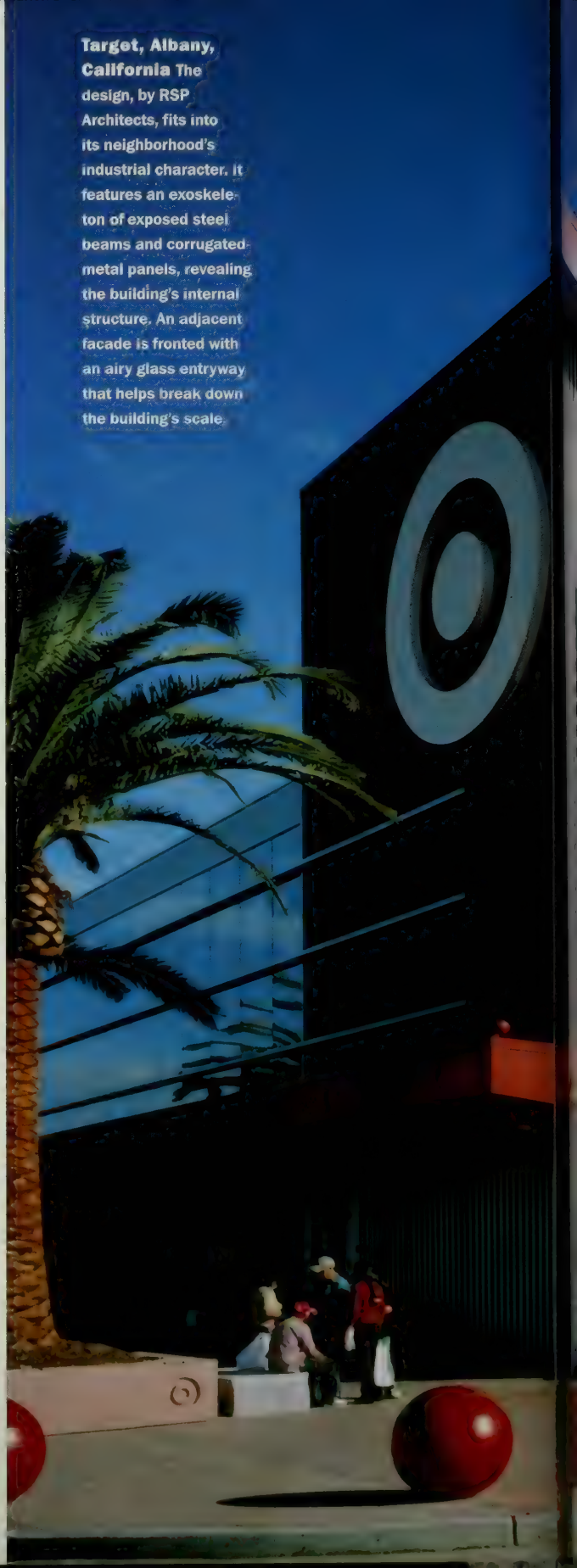
Where we are now

What exactly is a big-box store? The International Council of Shopping Centers' (ICSC) *Dictionary of Shopping Center Terms* loosely defines it as "a single-use store, typically between 10,000 to 100,000 square feet or more." The building type has permeated every corner of our society. According to Dodge Analytics, one third of all retail construction in the U.S.—99.5 million square feet—is concentrated among big-box stores Wal-Mart, Target, Home Depot, Kohl's, and Lowe's. Wal-Mart, the largest big-box retailer, has more than 4,800 locations worldwide, according to the ICSC—a number that grows by almost one a day—while more than 270 million people shopped there last year alone, the company says. Target, which says it has about 1,400 stores, recently announced plans to open 600 new locations in the next five years.

The business strategy that helps companies keep product prices low and stock share prices high generally values practicality and profitability over design. While consultants are paid well to formulate ideal product placements and drive purchasing, architects are paid little, if they're hired at all. Big boxes' gigantic sizes (which continue to increase on the whole, with many stores and "superstores" reaching well over 200,000 square feet) help minimize building costs per square foot. Aesthetic enhancements and customization are seen as unnecessary. Blank walls, single-story asphalt parking lots, metal-halide lighting, and single-level stores save money. But such insensitive design, turning its back on its environment, is dead from an urban standpoint, while inside "you never hear someone say 'it made me feel good to be there,' " notes Matthew Moore, an architect at New York–based ESI Design, which has worked with several big-box stores.

Communities force change

Of course, design isn't the primary reason that big boxes get a bad rap in the public eye. It's their social harm, such as driving out smaller businesses and degrading local environments (with storm-water runoff, greenfield consumption, and wasted energy). But tired of the hideous big boxes in their towns, many communities have begun reviewing designs or imposing zoning regulations to stop, modify, or restrict stores' sizes. Cities like Santa Fe, New Mexico; Austin, Texas; Flagstaff, Arizona; and Brattleboro,



Target, Albany, California The design, by RSP Architects, fits into its neighborhood's industrial character. It features an exoskeleton of exposed steel beams and corrugated metal panels, revealing the building's internal structure. An adjacent facade is fronted with an airy glass entryway that helps break down the building's scale.

PHOTOGRAPHY: COURTESY RSP ARCHITECTS

Is there hope for the BIG BOX?





Home Depot, Coral Gables, Florida
The design of this 85,000-square-foot store, which will open in 2006, includes a "living facade," made of sleek metal louvers and glass. Surrounding landscaping will help the store fit into its setting, while smaller, adjacent stores will encourage pedestrian activity and provide revenue. Parking will be stacked on top of the store, minimizing lot space.

Vermont, have all proposed or implemented retail-size caps. Portland, Oregon, has established voluntary maximum parking ratios for stores to minimize lot sizes. Most locales—almost silent only 10 years ago—now influence big-box design, notes Rich Varda, chief architect for Target.

For example, one of Target's more dynamic stores was developed under the careful watch of Albany, California's planning department, to whom Target and Minneapolis-based RSP Architects presented designs several times. Built in an industrial area, the store, completed in October 2004, fits into the neighborhood's character while adhering to the building standards of a zone-four earthquake zone. Its design features a concrete slab base and an exoskeleton of exposed steel beams and corrugated-metal panels, revealing the building's structure as if it were a retail version of the Centre Pompidou. Another facade is fronted largely with an airy glass entryway. The variety of elements not only catches the eye, but helps break down the scale of the 164,000-square-foot, two-story project. "It helps building become more connected to the area," says RSP principal Mic Johnson, about the review process. Johnson points out that the planning department also suggested a local civil engineer and landscape architect, whom Target hired, so the project became "even more grounded in the community."

In Coral Gables, Florida, Home Depot enlisted Florida architect Max Strang, AIA, to develop an 85,000-square-foot store after, as Strang says, "the planning department would not let them do their typical big box." The building, set for a 2006 completion, uses a "living facade," built in a tropical style and fitted with sleek metal louvers and glass. "We wanted it to be more than just cutesy add-ons and special effects," says Strang. To limit surrounding parking, a two-level parking deck will be stacked on top, along with a second-floor pedestrian colonnade, where a drugstore, a grocery store, and a garden center will be located. Clerestory windows will admit natural light, while tropical landscaping, including a 1-acre park filled with native vegetation, will soften exterior massing.

Bowing, in part, to community demands that stores match their contexts, companies have developed regional architectural models. Wal-Mart offers Alpine, Coastal, Mediterranean, and Mission styles. Target's offerings include Mountain/Northwest (used in Colorado, Washington, and Oregon), Spanish/Mediterranean (Florida, Texas, and the Southwest), and Georgian/Colonial (used on the East Coast). Unfortunately, such models are often derivative and watered-down, doing little to elevate the architecture. Varda notes that to further customize the designs, about two thirds of Target's new stores vary from its prototype.

Developers, too, are taking design into their own hands, although they use extra money, not government coercion, to convince retailers to stray from their formulas. Magnus Lindholm, a Swedish developer, paid perhaps millions (he won't say how much) to make sure his Wal-Mart/Home Depot, which was completed in spring 2003 in Avon, Colorado, near Vail, wasn't the typical big box. "I don't like ugly things," explains Lindholm, who adds that he wanted the stores (a 150,000-square-foot Home Depot and 180,000-square-foot Wal-Mart) to fit with the overall aesthetic of his commercial, residential, and office development. Lindholm's team, led by Arthur Erickson and Nick Milkovich Architects, helped minimize the visual impact of the stores by setting them against a nearby hillside (held in place with a retaining wall), constructing a large berm using 100,000 cubic yards of dirt (reaching the height of the nearby highway, usually a no-no in a business where stores become advertisements from the road), and planting over 500 native trees. An elegant wood-and-steel colonnaded canopy, about 600 feet long, in front of the stores, helps further disguise their big-box mass, and encourages pedestrian activity. A meandering park separating the stores is laid with Canadian fescue grass, sloping greens, and a small pond. "We're trying to create a sense of community to draw small businesses into the area, not push them away," says Lindholm's construction manager Erik Petersen.

Stores change themselves

Stores, meanwhile, are making changes on their own. Not only are they bowing to community pressure, but they are enhancing design to improve their images and stay competitive in a market where cheap prices, while still necessary, are no longer the only element shoppers desire.

"It's all about what differentiates you," says Strang. "Stores are learning that they have to reinvent themselves from a design standpoint in order to compete." To further improve its designs, Target revealed a new prototype for its stores in March 2004, with larger sidewalks, more landscaping, more lighting, varied building masses, larger entrances, and more

WHO'S LOOKING OUT FOR ME?

There is a delicate balance between safety and security – and it's held in perfect check with the innovative CrossingGard™ Emergency Response Grille from Cornell. Every day, the CrossingGard's exclusive locking system helps protect your corridors. But when the alarm sounds, CrossingGard automatically clears the path to allow escape without delay. So when crisis strikes, make sure you have the CrossingGard on duty.





CrossingGard™

EMERGENCY RESPONSE GRILLE

CORNELL

SAFE AND SECURE

Tel: 800.233.8366 Email: cornell@cornelliron.com

www.cornelliron.com

CIRCLE 41 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Wal-Mart and Home Depot, Avon, Colorado
A 600-foot-long wood-and-steel canopy in front of these two stores helps disguise their mass and encourages pedestrian activity. The stores are further minimized through surrounding landscaping, and by being built against a nearby mountainside.

windows, to name a few elements. Other big stores are beginning to focus on design strategies to give them an edge in a field where getting prices lower than Wal-Mart's is almost impossible. But even the elephant in the room, Wal-Mart, long known for sidestepping design in favor of price, is putting new emphasis on its stores' designs. The company revealed its own new prototype in July 2004. Changes include earth-toned exteriors (instead of blue and gray), facades with "variety in the massing," more daylighting, lower shelves, earth-toned interior colors, "more navigable" signage, and colored concrete floors (instead of tile). Still, the company lags far behind Target, whose focus on design has been central to its image since its inception.

To help improve interiors—an area where most big-box stores have generally lagged behind, Best Buy has its own design labs of sorts: smaller, edgier versions of the store that serve niche markets. In spring 2004, ESI Design created its "Escape" store in Lincoln Park, Chicago, which features exposed brick, rough-hewn steel, and red neon lights, among other "edgy" or "urban" elements. "Studio D," in Naperville, Illinois, replaces linear aisles with small, circular shelves. In many ways, says ESI's Moore, these designs influenced its 45,000-square-foot West Hollywood Best Buy, built concurrently. Shelf heights came down, partially translucent stretch fabrics replaced plastic and paper signs to increase visibility. The sales floor was split into various rooms, built to show off merchandise in a more pleasing, familiar environment than, say, rows of TVs. Still, most of the small stores' more experimental elements have not yet been incorporated at the big-box level.

A 110,000-square-foot Home Depot on Manhattan's 23rd Street (completed in 2004), designed by GreenbergFarrow Architects' New York office, also has low rack heights, which not only aid orientation, but help stores show off more merchandise at once. Transparent GKD mesh railings help maintain maximum sight lines. In the center, a double-layer skylight pours natural light inside, and modern lines lend the impression of "a loft on steroids," notes architect Navid Maqami, AIA, of GreenbergFarrow Architecture. White walls are simple, but natural elements such as wooden railings and strategic incandescent lighting make the store more welcoming.

As this store demonstrates, stores are changing their models because of perhaps the most important factor of all: economic opportunity. As they reach saturation in suburban and rural locations, big boxes have begun moving into urban areas, malls, and lifestyle centers (basically outdoor malls designed to look like urban areas), where new markets (and often wealthier clients) beckon. It's been widely noted that shoppers from Bergdorf Goodman are now warming up to stores like Target. Varda notes that Target, in only a handful of malls a few years ago, is now in more than 40, while the company (already a fixture in larger metropolitan regions) has recently opened stores in urban Chicago, New York, and Los Angeles. Bill Correll, head of architecture for Wal-Mart, cites urban stores in Atlanta, Cleveland, and New Orleans, noting that "participating with local communities in the design of Wal-Marts certainly plays an important role in our being accepted in new areas."

> "WE'RE TRYING TO CREATE A SENSE OF COMMUNITY—TO DRAW SMALL BUSINESSES INTO THE AREA, NOT PUSH THEM AWAY."

To fit into these markets—with tighter, more varied configurations than in the suburbs—stores must often be smaller, have more than one level, use multilevel garages, abut street lines, sometimes even have housing on top. They face stricter pressure to conform to their surroundings, particularly in historic areas. Maqami's three-level Manhattan Home Depot, developed within an 1859 cast-iron structure, was built under the watchful eye of the local preservation board, and shows only a trace of the company's logo on its exterior. Entrance windows abutting the street show off merchandise, a rarity for big boxes, which rarely cater to pedestrians. Two shopping-cart escalators—now used by many companies—bridge the entrance floor with the floor below. Its size, much smaller than the typical big box, does not allow for lumber or car loading, but that's not the point. In the city, stores need to be designed for carry-out items. Maqami says that the challenges of these environments generally make the stores more interesting. His 250,000-square-foot Target store at River Plaza in the Bronx is located

LESSON: Thermal + Moisture Control

Even the smallest leak in an air barrier or vapor barrier can lead to failure.



Formawall™ Dimension Series® won't leak.

Tiny imperfections in a wall's air and vapor barriers are a potential source for moisture control failure. That's because air pressure alone can cause significant amounts of moisture-laden air to flow through cuts, rips and even staple penetrations. That moisture can condense and remain inside the wall cavity, damaging materials and creating an environment for mold.

The effective alternative is Formawall Dimension Series metal and foam-insulated wall system. These lightweight single-component panels create a durable steel air and vapor barrier that can't be stapled, ripped or rendered useless by careless installation. And because Formawall Dimension Series is installed outboard of studs, breaking the vapor barrier with interior electrical penetrations is no longer an issue.



Learn more about avoiding moisture problems in exterior walls with the CENTRIA Institute's *Studies In Advanced Thermal & Moisture Control.* The handbook is free for architects, contractors and building owners with a phone call to CENTRIA today.

CIRCLE 42 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CENTRIA

www.CENTRIA.com

North America **1.800.752.0549** China **+86 (0)21 5831 2718** Dubai **+971.4.339.5110**



Target, River Plaza, Bronx, New York A 50-foot glass facade (left) lends visual connection between levels and breaks down the store's scale. Its bayed doorways evoke an urban streetscape.

Home Depot, 23rd Street, Manhattan, New York Mesh railings maintain sight lines (below), a double-story skylight provides natural lighting, and modern lines evoke "a loft on steroids," says the architect. Shopping-cart escalators facilitate a multistory design.

next to railroad tracks, a river, elevated trains, and an expressway. To fit into this spot, parking is stacked onto the building's roof, while the 50-foot facade is made largely of glass, breaking down the store's scale. This helps the store mesh with the neighborhood, and lends visual connection between all three levels. An entrance divided by recessed glass doors is reminiscent of an urban streetscape. Smaller stores attached to the main one via walkways create a pedestrian environment. Unfortunately, much of the development is still fronted with blank concrete walls, an apparent concession to convention.

Will things really change?

While the projects cited above are good examples of effective redesign, the question remains: Do they represent the new order or are they exceptions? Sure, companies will create innovative designs when they are pressured or want to enter a new market. But what about the thousands of other stores?

New prototypes are encouraging, but there's still a long way to go. Even better big-box designs today aren't architectural masterpieces. Many resort to a safe, Disneyfied recreation of reality. Hackneyed colors, bland materials, and historic references seem behind the times. Other problems remain. For one, suburban stores don't seem willing to abandon their huge parking lots for the space-saving features of urban stores. Experts are doubtful this will change, except in some suburbs' small islands of pedestrian life. Brent Ryan, a professor at the University of Illinois-Chicago, suggests that the Congress for New Urbanism implement clear standards for incorporating commercial retail. Another problem is that rural big boxes keep getting bigger, with limits forseeable only when (or if) customers get overwhelmed.



Outside of community and market pressure, perhaps the biggest influence is money. Big-box stores still thrive because of their low prices, most companies say, so for stores to improve, good design has to come cheap. At Strang's Home Depot, costs are offset by rent from adjoining stores, an increasingly common practice. Varda notes that extra design-studio time can save thousands, while Maqami notes that Home Depot had no idea how much his team could accomplish on a budget. Wal-Mart's Correll notes that many of his company's design improvements, initially more expensive, have brought long-term gains. Concrete floors save on cleaning, and fluorescent lighting is more energy efficient than metal halide in the long run. And what about the impression that better design might indicate higher prices? "It's not like we're a new retailer on the block," says Wal-Mart's Correll. "Having a good shopping experience is not something that's going to undermine that reputation." Still, some are skeptical of retailers' ability to improve on their own. "Left to their own devices, retailers will typically take the cheapest and less creative way," notes Daryl Mangan, longtime chair of the ICSC's design awards."Improvement will only continue as long as taxpayers and customers encourage retailers to create more attractive environments."

Fresh ideas are everywhere, although most remain unbuilt. GreenbergFarrow's Maqami designed a store for Manhattan's Hudson River waterfront, near Tribeca, which would have been built under a man-made groundscape to offset its size. Students at Syracuse University's Graduate School of Architecture envisioned designs for an IKEA in Red Hook, Brooklyn, that expand and contract, have rooftop meeting areas, and are open for community activities (even car races in the parking lot) during off hours. Students at the University of Arkansas Design Center have

CERTIFIED
ARCHITECTURAL WOODWORK INSTITUTE
QUALITY WOODWORK

As your project grows near,

be certain your expectations aren't out of reach.



When a design project becomes larger than life, you want to be sure you don't lose ground. That's why **savvy designers specify AWI Quality Certification** on custom architectural woodwork projects. AWI's internationally-recognized Quality Certification Program helps design professionals **verify the skills of woodwork providers, ensuring compliance** with the AWI Quality Standards during fabrication, finishing and installation when inspected.

Call **800-449-8811** or visit **awinet.org** to register your next architectural woodwork project.

And get an extra measure of assurance before you get clipped.

AWI ARCHITECTURAL WOODWORK INSTITUTE

1952 Isaac Newton Square West, Reston, VA 20190 | telephone 703 733 0600 | fax 703 733 0584 | www.awinet.org

CIRCLE 43 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Future Wal-Mart?
Students at the University of Arkansas envisioned a bright, lofty Wal-Mart entry (left), created by locating the garden center at the front of the store and using a glass curtain wall (latticed steel beams provide structural support). A Wal-Mart (not shown) that is opening in McKinney, Texas, has a photovoltaic facade, a huge wind turbine, underfloor heating, and a water-retention pond for landscape irrigation.





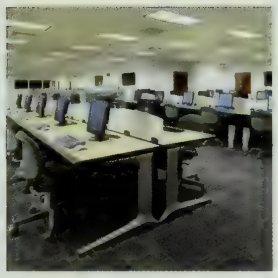
Future Projects
SBLM's Home Depot near the Holland Tunnel in New Jersey (middle) will use big-box materials in a new way: Orange metal panels fan out from the building, and galvanized-metal screens hide stacked parking. Maqami's big-box proposal for a Hudson River pier (above) would have been hidden by groundscape.

partnered with Wal-Mart to envision courtyards and gardens in parking lots, porches and arcades for entrances, and innovative ways to stack stores even higher. Big-box companies are also planning interesting models. New York–based SBLM's design for a Home Depot near the Holland Tunnel in New Jersey will employ the same materials used in typical big-box stores in a creative way. These include tall, orange corrugated-metal panels that will fan out from the face of the building; a glazed curtain-wall facade; a curved, corrugated-metal canopy; and stacked parking sitting behind a galvanized screen-metal panel. Varda says Target may replace much of its in-store inventory with digital displays. Responding to environmental criticism, Wal-Mart was scheduled in July to open an experimental store, designed by California-based LPA Architects, that must be the greenest big box in history. Located in Mckinney, Texas, the store has photovoltaics built into much of its facade, a 146-foot-high wind turbine, and will get much of its heating energy from used oil in its auto department and used frying oil from its food area. Underfloor heating and cooling will save energy inside, while outside, a water-retention pond will store water to irrigate native landscaping around the parking lot. The lot itself is heavily planted with trees and uses, in part, "pervious" pavement, allowing water to seep under it, rather than running off. Whether any of these technologies will be used in future stores depends on their success at the store, says Don Moseley, Wal-Mart's experimental projects coordinator.

Improving the quality of big-box store design isn't just an aesthetic whim. The stores, tied intimately to urban and suburban sprawl, have already come to define the worst elements of our landscape, and of our culture, putting profit over the good of the community. They continue to impose their soulless lack of identity onto cherished areas. Instead of letting big boxes impose their will, we all need to impose our own. "Freedom is a wonderful thing," says Mangin. "But it needs to be checked once in a while." ■

Smart. Innovative. Proven.











KI makes educational furniture specifically designed for today's college & university high-performance learning environments.

Smart ...
that's why more people imitate us.

Innovative ...
that's why we win more design awards.

Proven ...
that's why more schools choose KI than any other.

KI ... your one source for innovative educational solutions.

1-800-424-2432 www.ki.com

CIRCLE 44 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

KI

WORKING FOR YOU

What can you create with E-Sunshade™?

Stunning effects and convenient compatibility.



E•SUNSHADES™

Georgia Archives
Atlanta, Georgia
Architect: HOK
Erector: Glass Systems, Inc.,

Creating an outstanding look is just the beginning when you select E-Sunshade. With arms in five standard lengths and blades in seven standard shapes, E-Sunshade offers broad flexibility for visual appeal and functionality. E-Sunshade was developed specifically to complement EFCO curtain wall systems. This allows seamless designs and single-source convenience.

For complete features and specifications on E-Sunshade, visit efcocorp.com or contact your EFCO representative.

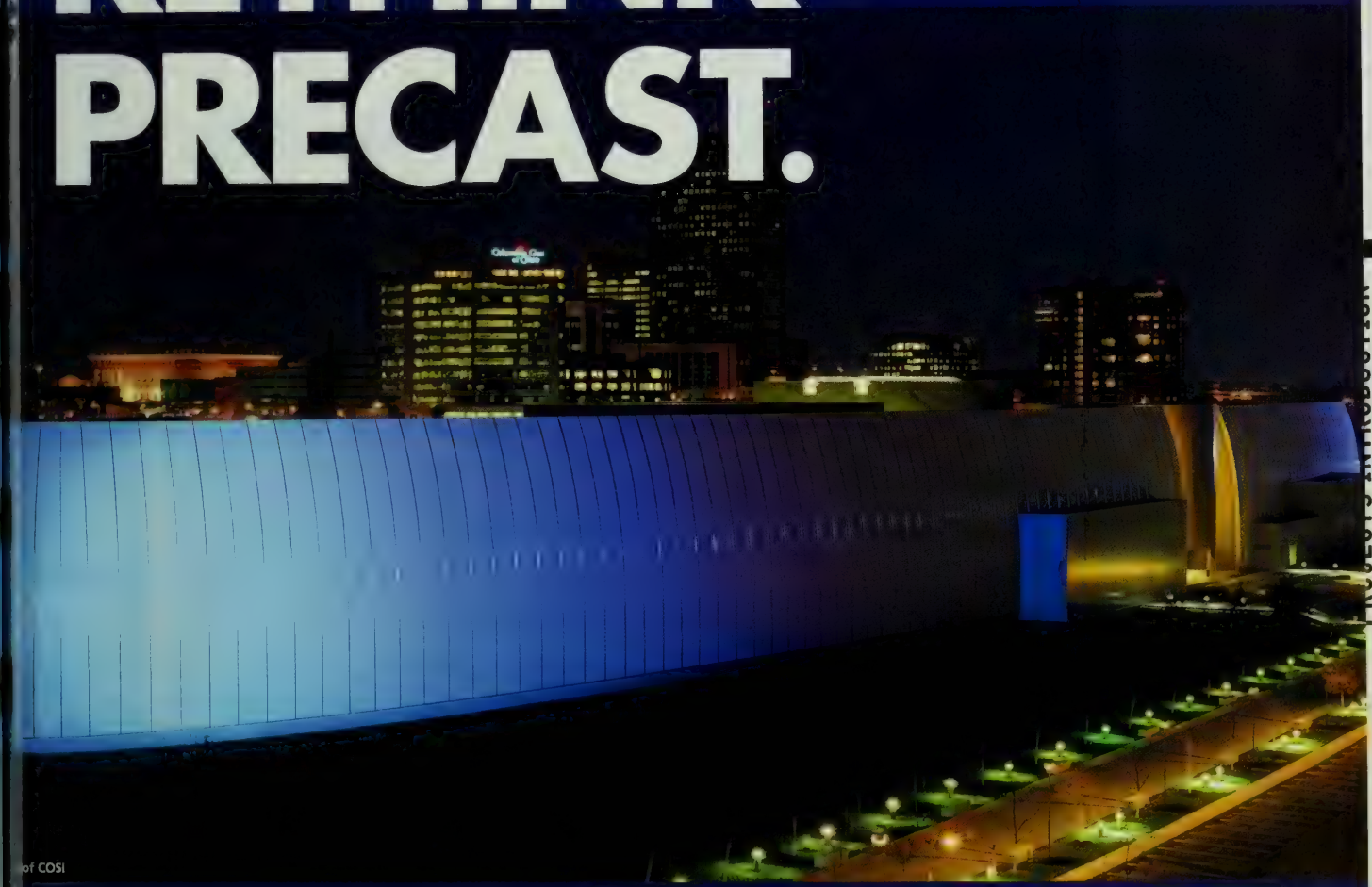
EFCO®

Where windows are just the beginning.

efcocorp.com | 800.221.4169

CIRCLE 45 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

RETHINK PRECAST.



of COSI

CIRCLE 46 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

High lets you take precast design farther than you ever dreamed possible. That's why internationally renowned architect Arata Isozaki relied on precast concrete to meet the unique challenges of the striking Center of Science and Industry (COSI) in Columbus, Ohio. High's unparalleled commitment to new technology and innovation has led to advancements such as carbon fiber reinforced CarbonCast™—precast that's stronger, lighter and more durable, allowing a virtually unlimited selection of colors, textures and finishes at no additional cost. And the 15'-wide MEGA-Tee deck system enables wider spans and more open plans in total precast buildings and parking garages. Cutting-edge structures like COSI are possible with High's expert technical assistance in all phases of a project, from design to erection. High gives architects the flexibility to explore unique solutions while ensuring a job is completed on schedule and on budget. Call High to learn more about how to rethink precast.

HIGH CONCRETE GROUP

HIGH CONCRETE ▪ CONCRETE INNOVATIONS & ANSWERS® ▪ CALL US AT 800-PRECAST ▪ WWW.HIGHCONCRETE.COM



Innovation Conference Case Study:
The Hearst Building, New York City
Norman Foster, Architect

SAVE THESE DATES
November 15 and 16, 200

The Third Annual McGraw-Hill Construc

INNOVATION CONFERENCE

SHAPING THE FUTURE OF DESIGN AND CONSTRUCTION

Enabling Imagination • Enhancing Process • Enriching Design

Presented by *Architectural Record*
in partnership with *Engineering News-Record and New York Construction News.*

Tuesday, November 15, 2005

Session I. Radical materials: Where do they come from and what's h: no
A panel of experts will take attendees on a whirlwind tour of the creative and creat process. Fresh from the lab, these items will transform the way you design a bu You'll be able to examine samples and take them with you.

Wednesday, November 16, 2005

Session II. If you can draw it, you can make it. **Digitally-enabled manufacturin** transforming the way we design and build—from custom moldings to entire house and almost anyone with CAD can take part in the revolution. Get in on it.

Session III. Case Study: The Hearst Building's architects, engineers constructors and owner will present a comprehensive case study of the n structure. Talk about innovation: from its anticipated Gold LEED rating to its creat construction to its gorgeous design, The Hearst Building embodies a spirit new thinking.

Two days of inspiration and tools you can use. If you're an architect, engineer, contractor or project owner who has to stay on the cutting edge, you must attend.

CONTINUING EDUCATION AIA

Innovation: Shaping the Future of Design and Construction **qualifies for Continuing Education Credit**

The Conference will be held
McGraw-Hill Corporate Headquarters
1221 Avenue of the Americas, New York

To register contact
Chuck Pinyan, 212/904-4334
chuck_pinyan@mcgraw-hill.com

For sponsorship information contact
Dave Johnson, 212/904-3334
dave_johnson@mcgraw-hill.com

connecting people_projects_products

McGraw-Hill CONSTRUCTION

Find us online at www.construction.com

Association Partner
AIA

The McGraw-Hill Companies

tter?

nuscle
lity



nitects—particu-
ıd elements, and
a willingness to
th engineering. It
piration to a for-
dges, tunnels, and
ot a new story: In
neering methods
ldings. Yet today's
uctural engineers
ı und Partner, are
f computer mod-
.

ıt illustrate these
ad, a performing
ınd Partners, and
ıdio Fuksas—also
acting as magnets
wo other projects
ermany, designed
ım on the western
oncentrate on car
h the BMW plant
ess.
, whether their size
Fair) or a relatively
ıys of introducing
e to big-box stores
and communities.
late, however, not
he sensitivity they
ure, not just over-

You know
what to do



Innovation C
The Hearst E
Norman

connecting people_pro

McGra
CONSTRU

Find us online at www.construction.com

Georgia-Pacific
COMMERCIAL

enMotion®

Recessed Automated Touchless Towel Dispenser



Welcome to the future of the washroom.

It was bound to happen. Take a good looking robot, introduce him to the right towel dispenser and voila, the enMotion® Recessed Automated Touchless Dispenser. With its advanced technology, no other dispenser on the market combines the advantages of a sleek, stainless steel finish, a recessed cabinet design and automatic touchless dispensing in one system. With one simple hand motion, it can elevate the image of your facility, help improve hygiene, increase operational efficiency and make a positive environmental impact. For more information call Georgia-Pacific Commercial at 1-877-377-2737 or visit us at www.gp-enmotion.com and ask about the newest addition to our cutting edge product line.

© 2008 Georgia-Pacific Corporation. All rights reserved. enMotion® is a trademark of the Georgia-Pacific Corporation or one of its subsidiaries.

AIA

The McGraw-Hill Companies

Is Bigger Better?

Architecture is pumping up using engineering muscle combined with design agility

By Suzanne Stephens

Scale always presents a daunting challenge to architects—particularly supersize projects. The sheer mass, myriad elements, and structural makeup of big buildings demand a willingness to attempt the grand gesture, tempered by a fascination with engineering. It is no wonder that design architects have turned for inspiration to a formal vocabulary of infrastructure used for highways, bridges, tunnels, and industrial buildings such as airplane hangars. This is not a new story: In the early 20th century, Modernists also looked to engineering methods and machine imagery in designing any number of buildings. Yet today's architects, working hand-in-hand with innovative structural engineers such as Arup, Buro Happold, and Schlaich Bergermann und Partner, are creating even bolder and bigger works with the help of computer modeling and advanced building materials and techniques.

Included in this issue are four buildings that illustrate these infrastructural leanings. Two projects—Sage Gateshead, a performing arts center in northern England designed by Foster and Partners, and the Milan Trade Fair, outside of Milan, designed by Studio Fuksas—also serve as visible urban regenerators for their regions by acting as magnets for attracting tourists, jobs, and related enterprises. Two other projects in the issue, the BMW Central Building in Leipzig, Germany, designed by Zaha Hadid Architects, and the Renault Square Com on the western edge of Paris, a renovation by Jakob + MacFarlane, concentrate on car factories to retool a company's commercial image, with the BMW plant even presenting new ways to organize the work process.

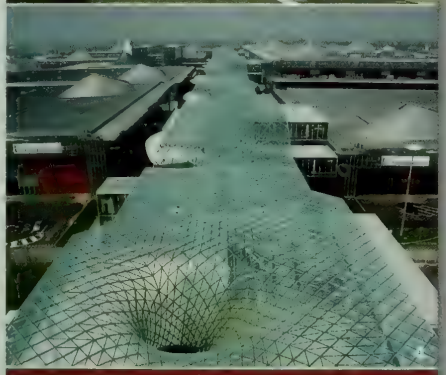
These efforts display bravado and imagination, whether their size is a humongous 2.1 million square feet (Milan Trade Fair) or a relatively petite 156,000 square feet (Renault). All illustrate ways of introducing design into the physical environment that has relevance to big-box stores (page 68), a continually vexing subject for designers and communities.

The question of their ultimate success will relate, however, not just to their size and daring execution, but finally to the sensitivity they display to the human scale. After all, this is architecture, not just overscaled infrastructure. ■


1


2


3


4

1. **Sage Gateshead**
Foster and Partners
2. **Renault Square Com**
Jakob + MacFarlane
3. **BMW Central Building**
Zaha Hadid Architects
4. **Milan Trade Fair**
Studio Fuksas

ROLAND HALBE (3); GIUSEPPE BLENGINI/STUDIO FUKSAS (4)

Zaha **Hadid** provides the connective tissue for a BMW complex by designing a **CENTRAL BUILDING** that brings people and cars together



Workers, executives, and visitors all enter the building at the base of a prowlike wing (right in photo)

By Raul A. Barreneche

Architects can't shake their fascination with industrial buildings. Icons of functionalism such as Fiat's Lingotto factory in Turin, the work of engineer G. Matté Truco (1926), and Peter Behren's AEG turbine factory in Berlin (1910), to name two relics of another era, still loom large in the imaginations of architects romanced by the buildings of manufacturing. But in our postindustrial, information-driven society, few factories manage to create inspired architecture from the exigencies of the assembly line.

In 2002, the German auto giant BMW invested in a high-profile competition to design a Central Building at its factory on the outskirts of Leipzig, a $1.55 billion complex where 5,000 employees can produce up to 650 of BMW's 3-Series sports sedans daily. From a field of 25 international architects, the company picked Pritzker laureate Zaha Hadid, whose sophisticated design turned conventions of factory design on their ear. Blue-collar factory workers and white-collar managers commingle in a fluid matrix of automotive production and administration. Unfinished auto bodies on their way to the assembly line parade silently on cagelike

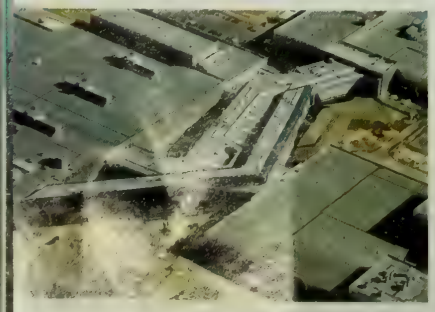
Contributing editor Raul A. Barreneche is the author of Pacific Modern *to be published by Rizzoli in the spring of 2006*



conveyor belts suspended above workers lunching in the corporate canteen or laboring in their cubicles. "Our idea was always to challenge the typology," says Hadid. "It took tremendous chutzpah for BMW to allow us to do this project."

German Chancellor Gerhard Schroeder officially inaugurated the plant with much fanfare in May 2005, although it was already up and running in February. The first 320i drove off the assembly line in March.

Though Hadid purports to shatter typologies, her building has no real precedent. It functions as a centralized node connecting three production buildings, designed by BMW's own real estate and facility management group and completed in 2004, each of which contains a distinct segment of the assembly sequence: the fabrication of raw auto bodies (645,000 square feet), the paint shop (270,000 square feet), and finally the vast assembly hall (1,075,000 square feet), where painted shells are fitted out and released as finished luxury vehicles. Hadid's 430,000-square-foot building, located at the intersection of these three production sheds, contains offices, an employee cafeteria, an auditorium, and glass-enclosed "audit rooms," where cars are randomly plucked off the assembly line, dissected, and analyzed in a public autopsy for quality control. Her building functions neither solely as administration nor as production space; it melds two integral but typically isolated strands of industrial business into a mutually inspiring relationship.



Like Truco's Lingotto factory, with its iconic rooftop racetrack, Hadid wove architecture from movement. But instead of the turning radius of a Fiat roadster, Hadid traced the flow of workers and visitors entering and exiting the building, employees traversing the space en route to lunch or from their lockers, the looping path of unfinished cars

Project: *Central Building, BMW Plant, Leipzig, Germany*
Architect: *Zaha Hadid Architects—Zaha Hadid, Patrik Schumacher, design principals; Jim Heverin, Lars Teichmann, project architects; Eva Pfannes, Kenneth Bostock, Stephane Hof, Djordje Stojanovic, Leyre Villoria, Liam Young, Christiane Fashek, Manuela Gatto, Tina Gregoric, Cesare Griffa, Yasha Jacob Grobman, Filippo Innocenti, Zetta Kotsioni, Debora Laub, Sarah Manning, Maurizio Meossi, Robert Sedlak, Niki Neerpasch, Eric Tong, design team* **(continued on page 90)**

The 430,000-square-foot building rises from a flat plain in what had been East Germany (above and right). The BMW complex provides thousands of jobs in an area that has a long history of car making but now suffers from an unemployment rate hovering around 20 percent.





circulating from one plant area to the next. These paths of real and perceived movement coalesce into a nerve center for the larger factory complex. As if exerting a gravitational pull over the site, Hadid's building concentrates flows of people, materials, and communication and distributes them through a knuckle in the site. "We didn't think about the project as compartments; we always saw it as a whole, a single diagram," says the architect.

In plan, ribbons of steel and concrete ribs in the ceiling planes trace lines of motion above soaring volumes defined by steel roofs stretched tautly, like tarpaulins, over a sinuous concrete framework. Floors of rubberized "asphalt" suggest indoor roadways. In section, sweeping staircases and two runs of stepped platforms (containing open workstations) cascade through the space contrapuntally. Half-finished automobiles winding in and out of the central building on the overhead conveyor belts create a temporal datum; the ghostly unpainted cars, illuminated softly by blue uplights within the conveyor structure, move to a slower rhythm than the daily to-and-fro of the building's human occupants. "Our work has always been influenced by ideas of movement. There's always a desire to achieve buildings with fluidity and complexity," says Hadid.

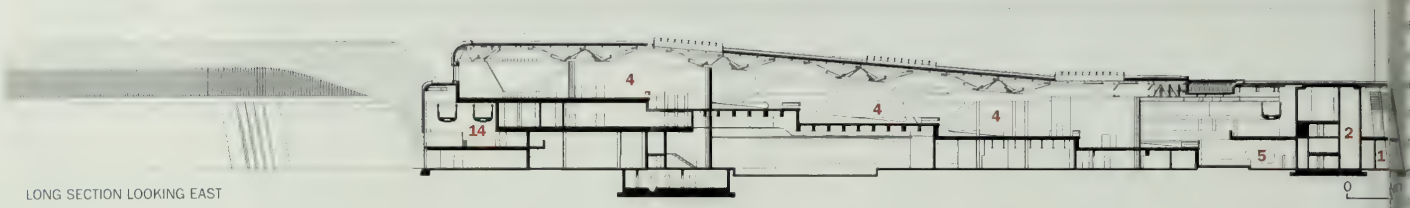
Indeed, every curving corner of the building conveys a sense of motion, from the kinetically angled concrete piers marking the entry into the soaring lobby—as spatially rich and materially polished as any grand museum entry—to the chamfered and filleted exterior walls resembling the angular windows of an automobile, and the gently stepped platforms containing work spaces. Hadid kept the terraced landscapes of open cubicles visually permeable so workers remain in touch with other activities around them. "You don't disappear into your own task. And you don't miss out on what is happening in the corporation. You are reminded of all the things you can and should connect with," explains Patrik Schumacher, Hadid's design collaborator. In that sense, the architects have created an internalized urban space, with layered intertwined threads of activity that generate a lively hum.

The building is also exceedingly democratic. Blue-collar line workers and white-collar managers eat in the same cafeteria. Executives do not inhabit a command center removed from the front lines of the factory; rather, managers work out in the open, very much in keeping with BMW's nonhierarchical culture of transparency and accessibility. As Peter Clausen, the Leipzig plant manager, suggests, "The structure has an impact on everyone's behavior. People don't complain about each other. And you can literally see if the plant is working, like the exposed heart of a huge organism."

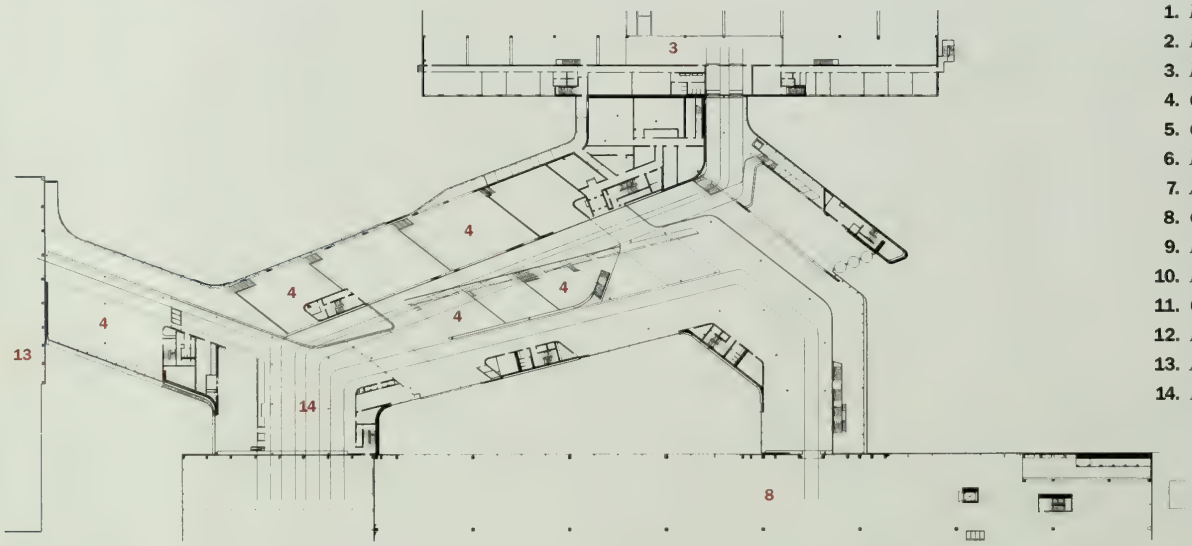
Many of Clausen's colleagues initially worried that Hadid's



In both plan and section, the building features swooping elements that trace the flow of people and cars through the facility (this page). The entry hall (opposite) flows into a café and gallery.

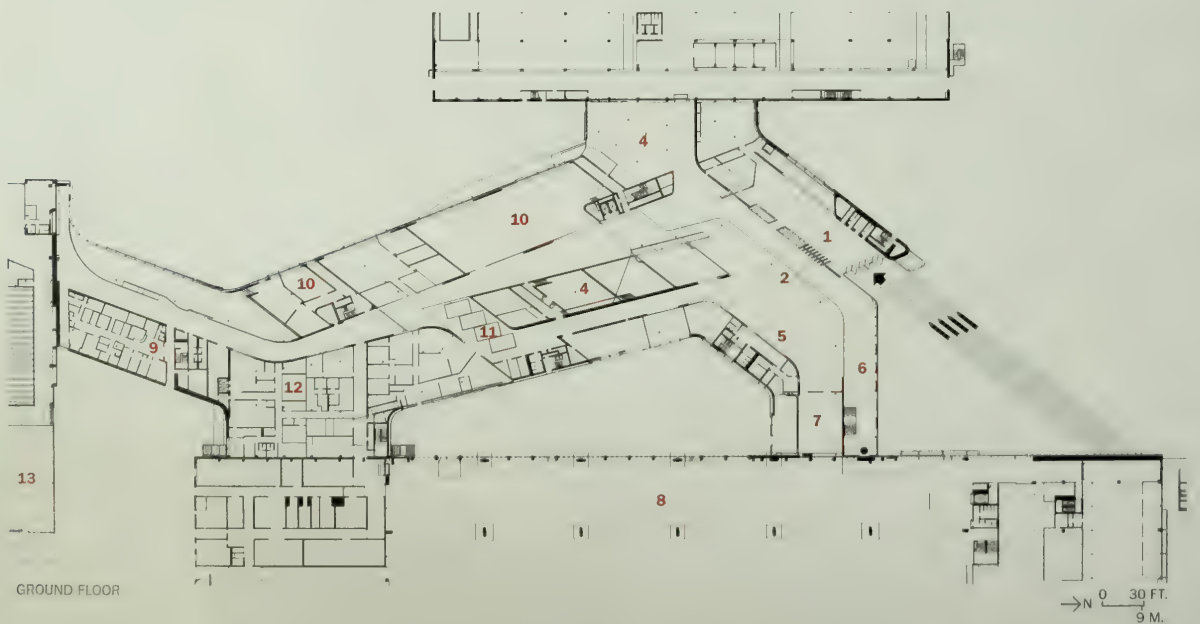


LONG SECTION LOOKING EAST



SECOND FLOOR

1. *Entry hall*
2. *Foyer*
3. *Paint shop*
4. *Offices*
5. *Café*
6. *Display*
7. *Auditorium*
8. *Chassis manufacture*
9. *Infirmary*
10. *Laboratory*
11. *Quality control*
12. *Kitchen*
13. *Assembly*
14. *Dining*



GROUND FLOOR

The building brings together production, administration, and research functions under one roof. The architects created an internal street with offices on one side cascading down a series of terraces and technical spaces on the other side (below). Views from offices and upper levels into other areas (right) help create an environment where working together is encouraged.











Unfinished car bodies, uplit in blue light, move along suspended beltways above office areas (top left) and even the employee cafeteria (above left). A small café sits near the building's main entry (right).

design would be "a nightmare. People said, 'It will be loud; it will smell. You won't be able to work with conveyors moving through the building.' There was a lot of anxiety and resistance to the project, but things changed quickly. We had to get rid of prejudices and learn how to use our new freedom," says Clausen. To those early skeptics, Clausen points out that the conveyor in the cafeteria that transports dirty dishes to the kitchen is louder than the belt that moves cars through the building.

Architect Matthias Sauerbruch, chair of the jury that picked Hadid's scheme over entries by Richard Rogers, Greg Lynn, Reiser + Umemoto, and others, suggests that the winning design is without typological precedent. "It's almost infrastructure," he says. "It's not just spatially exuberant; it's the project that most precisely fit the brief, which was very complicated."

BMW's investment in serious industrial architecture for the postindustrial era will continue. Next summer, the company will open BMW Welt, a mixed-use building designed by Coop Himelb(l)au located next to its Munich headquarters. But before then, the car company intends to open its Leipzig facility to the public; it anticipates about 50,000 visitors yearly.

Hadid's building proactively channels flows of occupancy, exchanges of information, and movements of auto bodies to shape a new, urbanized interior landscape of industrial production. As the architect says, "Industry always has to invent and innovate. In architecture, you also have to renew yourself constantly and try new things." The BMW Central Building may not break entirely new ground for Hadid—she acknowledges a longstanding interest in movement and admits to certain similarities with her upcoming museum in Rome—but it reflects the increasing clarity of her recurring design thinking. And it shows that her architecture not only looks good; it also performs well. ■

Credits (continued from page 84)

Landscape architect: *Gross. Max*
Engineers: *AGP Arge Gesamtplanung (structural, civil, m/e); Anthony Hunt Associates (structural); PMI (acoustic); Equation Lighting (lighting)*
Project manager: *ARGE Projektsteuerung*

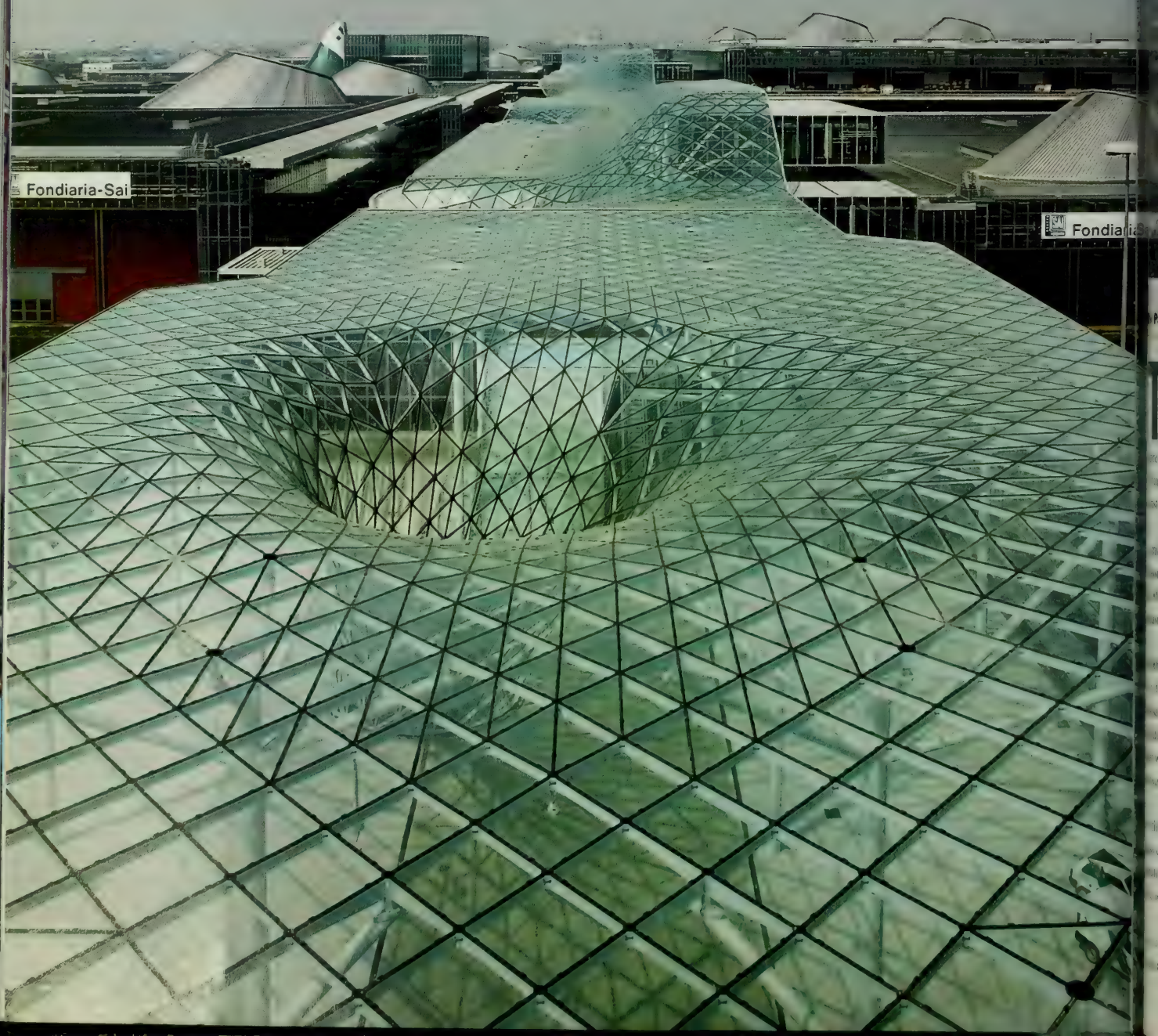
Contractors
Steel: *Max Bögl Bauunternehmung*
Facade: *Radeburger Fensterbau*
Fit-out: *Jaeger Akustik*

For more information on this project, go to Projects at **www.architecturalrecord.com**.



All white-collar employees, even the top executives, work in open-office areas bathed in daylight from skylights and perimeter glazing. The plan encourages a democratic work ethic.

The noncurved region of the *vela* (Italian for sail) roof is an even, quadrangular grid arranged diagonally. In the transition to the curved regions, the warp of the quadrangular mesh exceeds the limit set for plane glass, hence its subdivision into triangular mesh.



Studio Fuksas drapes glass and steel as if it were fabric over its **MILAN TRADE FAIR**, a convention center for trade and fashion



By Paul Bennett

The entire peninsula of Italy is about the size of Arizona. Rome, its largest city, has fewer than three million people, and Milan about half that. More important, Italians are accustomed to small things: narrow streets, Fiat 500s, and demitasses of espresso. But something happened on the plateau between Milan and Turin this past year, and for several months Italy contained the largest construction site in the world.

The result was the Fiera di Milano, or the Milan Trade Fair, a mile-long exhibition fairground designed by Roman architect Massimiliano Fuksas. The Fiera covers 2.1 million square feet, provides 20,000 parking spaces and two-dozen restaurants, and by almost every measure stakes a legitimate claim to being called a megastructure.

"The new Fiera is not a building," says Fuksas. "It's too big. Some 50,000 people could live inside of it." Fuksas considers it "a city in itself." But it's not a city. The Fiera is a convention center, and so from the start Fuksas grappled with the critical challenge that confronts all overly large buildings of this sort: legibility. How does one design a place like this so that we don't find ourselves spinning around in mind-numbing circles, consumed, in a way, by the ongoing bigness of the place?

Fuksas dealt with this, first, by creating a strong central image for the building that continually draws the viewer's attention inward: a glass canopy that bisects the complex and loosely binds together its disparate elements. A waving, undulating gesture, this canopy—nicknamed *vela*, which is Italian for sail, by the workers—is composed of a steel-mesh armature divided into rhomboid and triangular nodes holding triangular glass panes. In addition to slender steel pillars, the roof is supported by vortexlike parabolas of glass and steel that give the impression that the canopy floats, only touching the earth here and there.

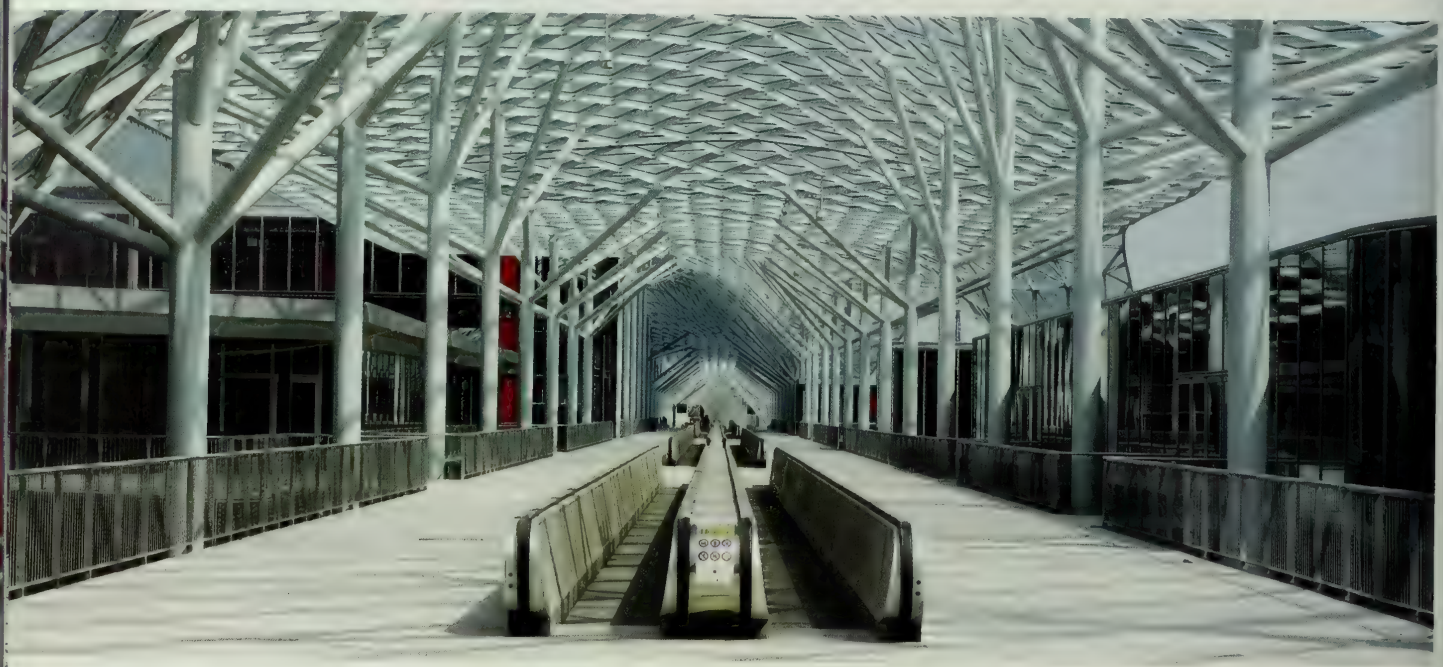
Like any glass house, the canopy reflects and refracts a tremendous amount of light and therefore creates a luminous glow that is visible everywhere, even in the darkest innards of the pavilion buildings. One always has a sense of where the center of the site is. An elevated, blue-tinted walkway that runs under the full length of the canopy feels ethereal, even cosmic, flooded in intense light and surrounded by waving glass.

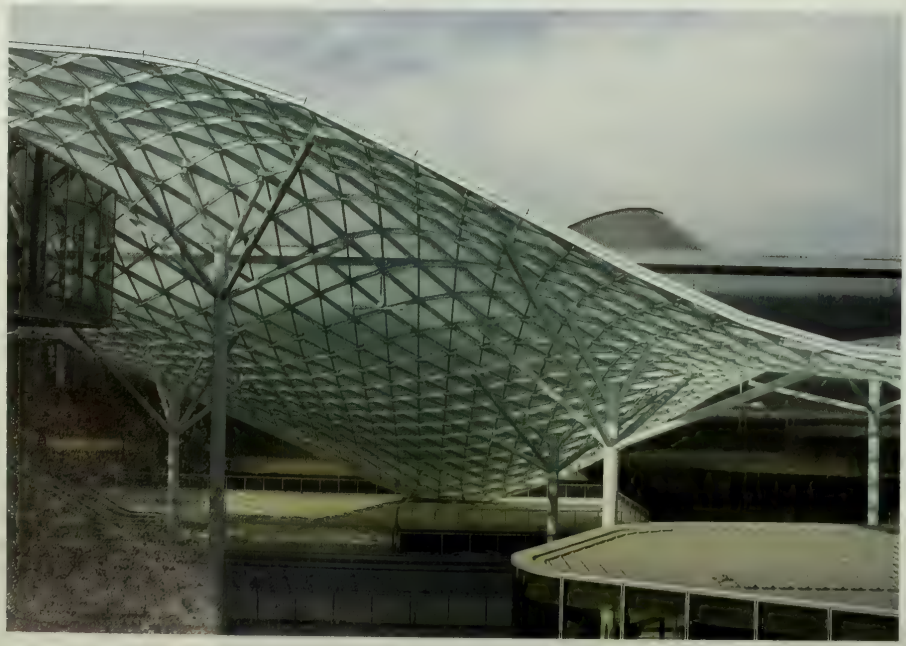
Placed along this linear Main Street of glass and light are the buildings that actually house the complex's many activities. In order to make the entire ensemble seem coherent, Fuksas created a rigid architectural typology to demarcate each building's function. There are four types. The eight exhibition halls, where the bulk of the trade-show booths will be set up, are highly functional—one might call them industrial—warehouses. Large (530 by 730 feet) rectangular boxes with huge nozzlelike protrusions in their roofs, sheathed in polished steel, have orange facades facing the canopy: a burst of color in this otherwise airy space that makes them immediately recognizable. In the middle of the site, marked by a huge glass-and-steel cone, rests the "service center," which contains a main

Paul Bennett, a Rome-based writer, is a former editor for Landscape Architecture *magazine.*

Project: *Milan Trade Fair, Italy*
Architect: *Studio Fuksas—Massimiliano Fuksas, principal; Doriana O. Mandrelli, art director; Giorgio Martocchia, Angelo Agostini, Ralf Bock, Giuseppe Blengini, project architects*
General contractors: *Astaldi; Vianini; Pizzarotti*
Structural engineer: *Schlaich Bergermann und Partner*



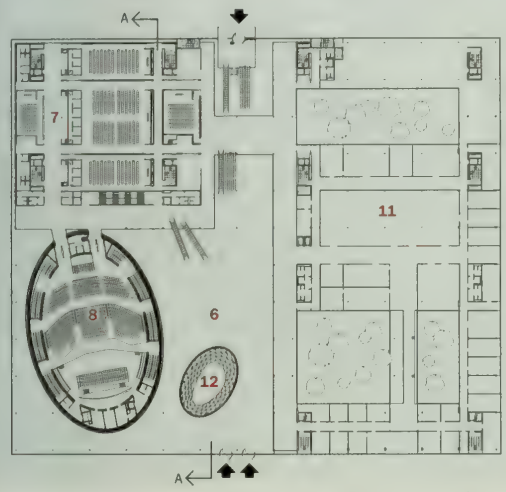




The center of the site is traversed by a nearly mile-long elevated walkway (left and above), covered by the canopy, which moves in and out of the trade fair's buildings, but never touches them. As a rule, tree columns, with six branches each, support the *vela* roof at regular intervals. The two inner branches serve as drainage. Occasionally, the glass-and-aluminum-clad canopy touches the ground in full- or half-volcanoes (section, opposite). In some cases, the canopy rests on the buildings underneath. The *logo* roof (top) marks the entrance to the trade fair.



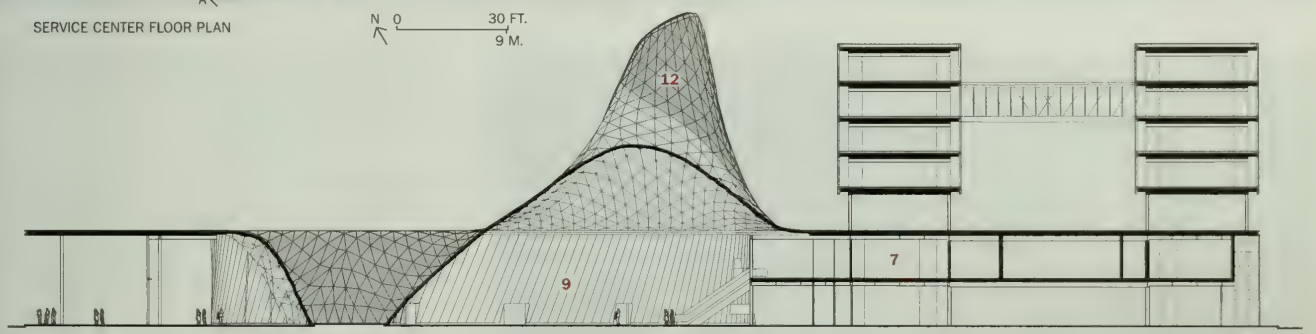
SITE PLAN



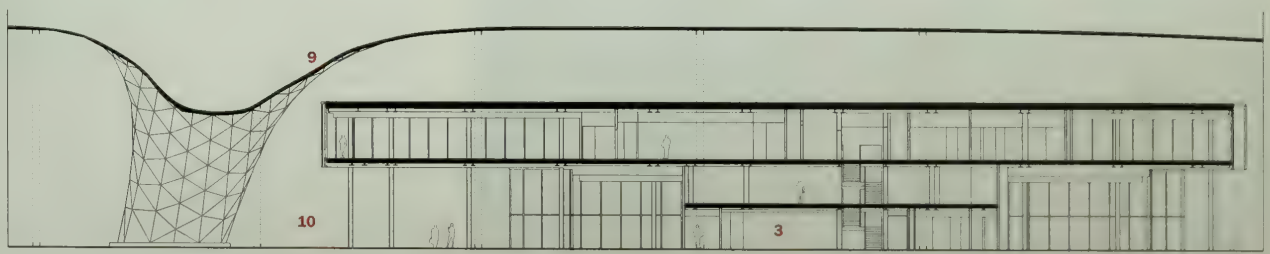
SERVICE CENTER FLOOR PLAN

N 0 30 FT. 9 M.

1. *Exhibition hall*
2. *Meeting space*
3. *Restaurant*
4. *Offices*
5. *Service center*
6. *Entrance hall*
7. *Conference room*
8. *Auditorium*
9. *Technical center*
10. *Canopy*
11. *Walkway*
12. *Entrance cone*



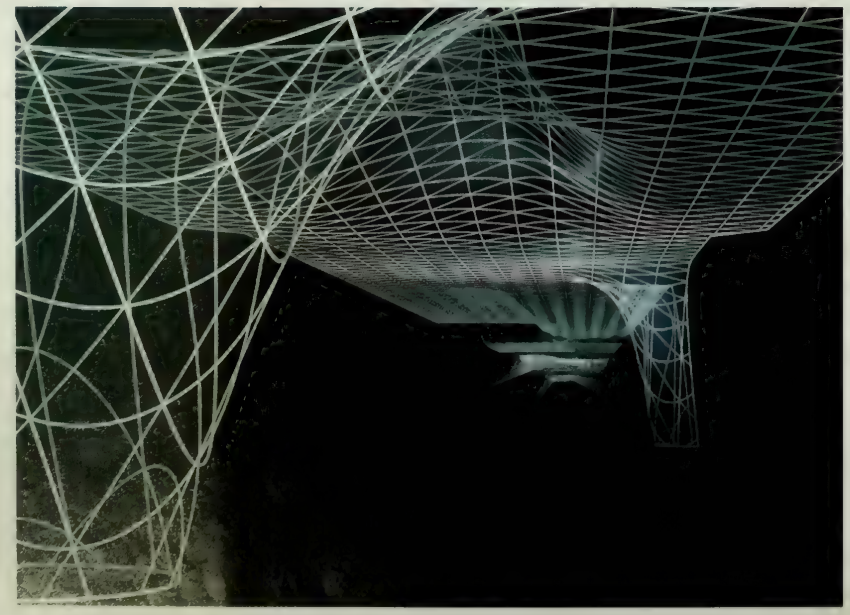
SERVICE CENTER SECTION A-A



SECTION OF WALKWAY RESTAURANT

0 30 FT. 9 M.

A conceptual sketch by Fuksas was worked into a model (below), then digitized with Rhino 3D software. Subsequent formal experimentation helped create shapes that appear to be less than solid. Cubic glass and steel buildings near the central axis (left) serve as offices, which look out onto the canopy's tree columns (opposite).



Grid topology and structural behavior of a free-formed glass surface

The so-called *logo* (Italian for symbol) is the section of the glass roof that marks the entrance to the fairgrounds, rising to 121 feet. The *vela* (sail) part of the roof links the individual halls over a length of 4,265 feet. It is divided into 12 regions, each about 328 feet long, with floating fix-points at the tree columns and stationary fix-points at the "turned-down volcanoes," or funnels, in order to control deformation due to temperature changes. The *logo* roof, which is mostly double-curved and completely free-form, calls for triangular meshing for efficient load-bearing behavior as a shell. Both the *logo* and *vela* structures consist basically of welded-steel profiles, with the individual structural elements prefabricated offsite. Most were bolted together, so little welding was required.

Source: International Journal of Space Structures, Vol. 20, No. 1, 2005.



entrance hall, an auditorium, a conference room, and technical rooms. Next come the 20 small restaurants and cafés that line the walkway. These steel-trussed glass structures with wavy facades stand on pillars so that they reach the walkway. The meeting halls, which are designed as small, Gehryesque stainless-steel-clad blobs, hover at walkway level. Office spaces for the Fiera administration, also spaced along the walk, are contained in simple glass and steel boxes.

Below the walkway, at ground level, each building is given its own landscape treatment. The bloblike meeting halls get gravel-lined reflecting pools. The wavy restaurants get bamboo forests. The office buildings, green grass. The effect of this is to create a kind of fantastic wonderland of architecture and a space that is also coherent. You know at once whether you're looking at a restaurant or a pavilion. And although the building overwhelms with its scale—the vista down the walkway is a bit frightening in its awesome size—it is easily understandable.

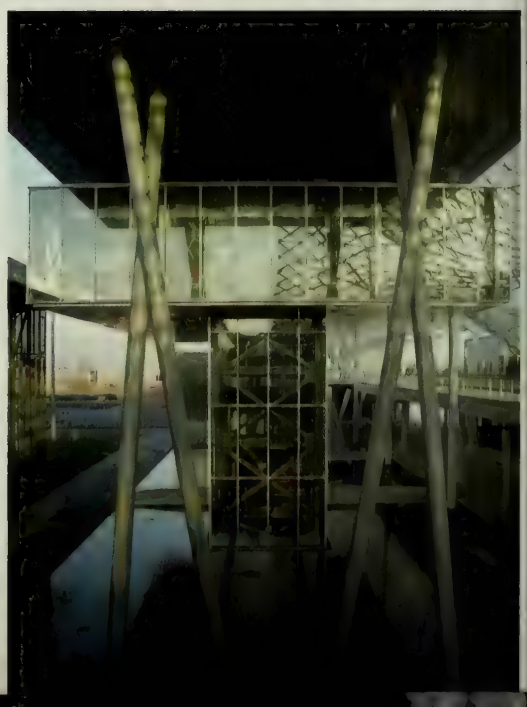
Fuksas confers legibility to the trade-fair structure through the scale and orientation of the buildings. With the exception of a few minor piazzas that eddy off the walkway, everything in the Fiera is oriented toward the canopy, the main axis and a kind of Main Street. The structures placed directly on the walkway (the restaurants and meeting halls) are small, while those set slightly back from it (the pavilions) are much larger.

One advantage that Fuksas enjoys here is the lower value placed on air-conditioning in Italy, which allows him to arrange all these elements not inside a closed space—where they would seem very contrived—but in an open-air landscape. The freestanding canopy never joins any of the buildings, and as it jiggles and wriggles across the site, it creates a thousand different, beguiling intersections between architectural and sculptural form.

The Fiera began life nearly a decade ago when the city of Milan realized that despite the cultural importance of the conventions and exhibitions that it hosted in its fairgrounds—including the yearly furniture show—the city was being rapidly outpaced by others like Chicago and Frankfurt in the global competition for large-scale trade shows. At the same time, the European Union was looking to invest in a brownfields cleanup project in the industrial and postindustrial suburban megalopolis that extends 77 miles from Milan to Turin. The E.U. agreed to clean up a former AGIP gas refinery near a primary highway intersection connecting eastern and western Italy to the northern reaches of Europe if the city would build a $700 million trade-show complex on the space. The cleanup took just over a year and involved substantial removal and chemical cleaning of the soil, before Fuksas was tapped for the design.

According to Giuseppe Blengini, an on-site project architect, the design of the Fiera followed the same process that all of the firm's

Each building is given its own landscape treatment at ground level: Blob meeting halls get gravel-lined reflecting pools (above); the wavy restaurants get bamboo forests; the elevated office buildings, green grass (right). Convention pavilions (opposite) are large (530 x 730 feet) rectangular boxes clothed in polished steel, with generous openings to admit natural light.





projects undergo. It began as a rough, conceptual sketch by Fuksas himself. In this case, the inspiration came from the local landscape, a melange of natural elements (a stream meandering through plains) and some unnatural ones, including a "mountain of steel," emblematic of northern Italy's industrial landscape. This sketch was worked into a model, which was then digitized using Rhino 3D modeling software, a program favored by industrial designers and conducive to sculptural work. Blengini says that the back-and-forth between sketch, model, and computer was repeated dozens of times, with the ever-present Fuksas honing certain details.

Although it looks very complex, the canopy's use of standardized triangular glazing for most of its span made it relatively easy to construct. The entire project was completed in 27 months, lightning-fast in Italian terms. "Making the canopy was the easy part. After the first 328 feet, we went fast," says Fuksas. "The hard part was the vision. The scale is so immense that we never fully comprehended the project until it was done."

A building like the Fiera may never become lovable like so many classic structures of smaller scale. Even a skyscraper has a certain intimacy to it compared with a nearly mile-long exhibition hall in the suburbs. But in the face of this challenge, Fuksas has made a significant contribution, creating a space that is full of wonder. You half expect to see St. Peter at the end of that walkway when you arrive. But it's also comprehensible and, therefore, usable. It gives trade-show goers a much needed respite from the inhumane landscape characteristic of these shows—the miles of cardboard displays, bitter coffee, and bad-joke soliciting that leave one drained after minutes. All along the walkway we find amazing spaces where a building comes close to the canopy in a beguiling dance of unusual geometries or where a vista opens below us of a stainless-steel blob hovering over a reflecting pool bathed in milky light. These are sublimely architectural moments when form, volume, and light offer to lift us out of the banality of the show we might be attending and remind us once again that sometimes buildings can be something more than just the containers of our lives. ■

Sources

Glass roof (central axis, service center): *MERO GmbH*

Curtain walls: *Permasteelisa*

Steel structure: *Icom Engineering; Ask Romein; Carpentieri d'Italia*

Roof components: *Bemo Systems*

Lighting system: *Lampada Lavinia, by Doriana and Massimiliano Fuksas for Guzzini*

For more information on this project, go to Projects at **www.architecturalrecord.com.**



The existing factory building featured zinc-clad sawtooth skylights (this page and opposite, top). The three roof heights corresponded to different manufacturing processes. Jakob + MacFarlane's glass roof joins the original sawtooth building with a smaller structure, once a cafeteria (opposite two).

Jakob + MacFarlane transforms an existing shed, erected for a factory complex, into the vibrant RENAULT SQUARE COM communications center

By Philip Jodidio

Designed as a prototypical manufacturing building for the Renault automobile company, Métal 57 was nearly obsolete by the time it reached completion in 1984. Automotive technologies had not changed radically during the construction period, but major structural changes in the company had rendered the vast, brick-clad shed near Paris useless to Renault as a factory. So, Métal 57—intended for the fabrication of metal car parts—never operated as a plant, but idled as a warehouse and ad hoc location for car sales to firm employees. Over the years, the building stood at the center of various transformation proposals and even faced the threat of demolition. Then, nearly two decades later, the Parisian firm of Jakob + MacFarlane won a competition to turn the structure into Renault's corporate communications center. This recently completed project has finally revved Métal 57 back to life.

But the story of this building—going well beyond its brick walls and great sawtooth roof—remains inseparable from the history of Renault: its humble beginnings on Séguin Island, in Boulogne-Billancourt, at Paris's western extremity, and the factory complex that grew there. Séguin Island holds a particular place in French industrial folklore. There, in 1898, automobile pioneer Louis Renault founded the firm that still bears his name. By the mid-20th century, design and manufacturing operations, as well as administrative headquarters, occupied 154 acres—22 on the island, and the rest opposite it on the Seine's Right Bank.

With buildings mostly from the 1920s, '30s, '40s, and '50s, the complex grew like a small town. By the early 1980s, the company launched an ambitious program to replace all its aging structures with state-of-the-art facilities—and granted architect Claude Vasconi the commission to supplant the existing buildings with a scheme for about 20 new ones. But this renewal campaign would soon collide with a period of turbulence and upheaval. As the firm struggled through debilitating strikes, it also seized on the idea of decentralization, a trend then emerging across the manufacturing sector.

Just as Métal 57 reached completion, on the Seine's Right Bank, Renault moved its research and prototyping operations to Guyancourt, near Versailles—and later relocated its industrial manufacturing processes to western France. In 1984, the entire renewal project came to a halt, leaving Vasconi with just one structure on the site. Winner of the Grand Prix National d'Architecture, the 156,000-square-foot Métal 57 featured

Philip Jodidio, a Paris-based journalist, has written many books on architecture.





Project: *Renault Square Com, Boulogne-Billancourt, France*
Architect: *Jakob + MacFarlane—Dominique Jakob, Brendan MacFarlane, principals; Patrice Gardera, project architect; Sébastien Gamelin, Christian Lahoude, Petra Maier, Jean-Jacques Hubert, Antoine Santiard, Antoine Lacoste, Andrei Svetzuk, Oliver Page, Eric Page, project team*
Sources
Hardware: *d line; Dorma*
Acoustic fabric: *Texaa*
Plumbing fixtures: *Duravit (toilets); Corian (custom sinks by architects)*





"Pleated" walls (top and above, and opposite) provide backdrops for displaying cars. These folded planes also become screens for projected words and texts. And certain walls are structured to hold an automobile mounted on display. The original factory gantry helps move cars, and ground-level exhibition areas facilitate driving in and out.

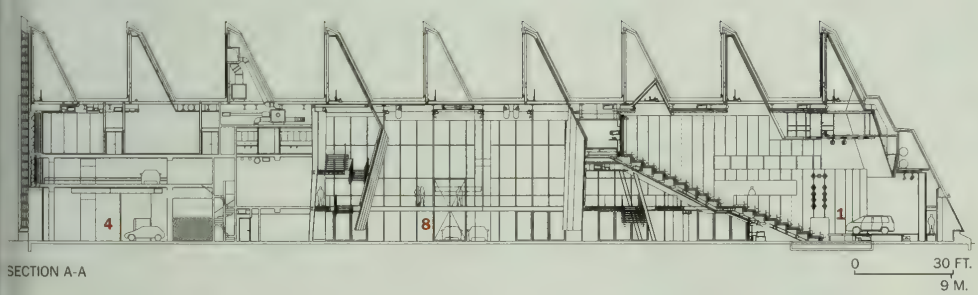
zinc-clad skylights, steel trusses, large concrete beams and pillars, a rolling gantry, and a progression of three ceiling heights—ascending from 6 to 9 to 12 meters (approximately 10 to 20 to 30 feet)—corresponding to different production processes.

But seven years later, Renault closed the factory. Its directors deemed the aging structures too costly to replace and the prospect of running a plant so near a major city too complex. Since then, schemes to convert or refurbish Métal 57, and the rest of the site, have included a government proposal for welfare housing and scientific facilities to occupy the full 154 acres. A master plan by Renzo Piano and landscape architect Alexandre Chemetov called for preserving most of the existing structures, while a later scheme catered to local politicians eager to raze the factories. Finally, architect Jean Nouvel published a vitriolic letter in *Le Monde*, defending the industrial architecture and forcing all concerned to reevaluate. The politicians then announced the rescue of some of the factory structures—"the memory of France's working class"—Métal 57 in particular.

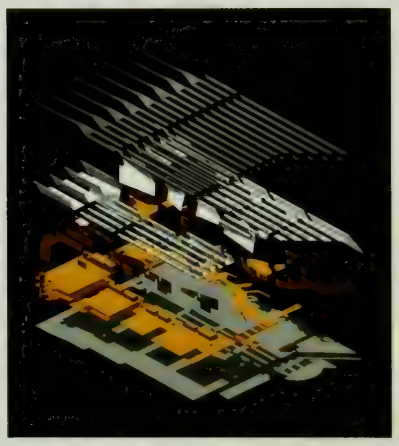
Renault had begun selling parts of the complex in the late 1990s: first, the upstream tip of Séguin Island to businessman François Pinault, and then another tract to the city of Boulogne-Billancourt. In 2001, Pinault chose Tadao Ando to build a contemporary art center directly across the river from Métal 57, but bureaucratic delays, he says, led him to cancel the project in 2005.

In 2001, Renault held a competition to convert Métal 57 into a corporate communications center. The jury, including Claude Vasconi, selected Jakob + MacFarlane, best known for their Georges Restaurant [RECORD, September 2000, page 128] atop the Pompidou Center. Renault's directors envisioned the center as a base for its public relations staff of 250 to 300 people, as well as a place to present new cars to the press and automobile industry leaders and to invite the firm's marketing groups from around the world. It would be a venue for meetings, entertainment, dining, and other events showcasing Renault cars—complete with a garage





SECTION A-A

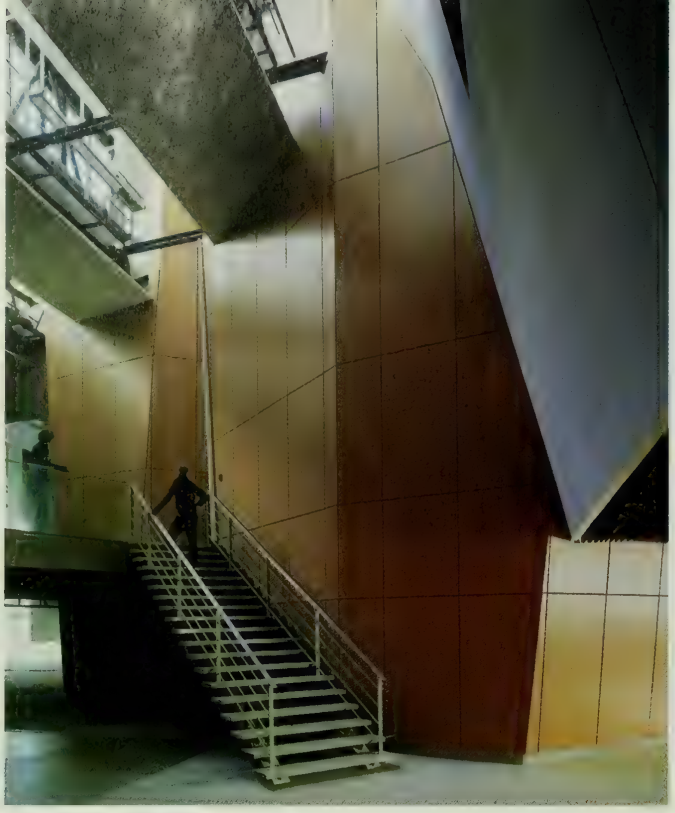




UPPER LEVEL

1. *Offices*
2. *Theater*
3. *Meeting*
4. *Parking*
5. *Entry (below)*
6. *Seminar*
7. *Entrance atrium (below)*
8. *Exhibition*

The interior was conceived as a series of inserted elements (above). Enclosed meeting rooms and auditoriums (in yellow) are objectlike, with skylights, at three levels, above them. "Pleated" walls (in white) run east–west, while wood (in brown) cladding the enclosed volumes runs primarily north–south.





housing the latest test-drive vehicles. The brief called for three auditoriums, seating 500, 300, and 100 people, respectively; 40,800 square feet of exhibition space; seven flexible seminar rooms; a pressroom; and offices—all in the vast shed. The entire ground level, including the auditorium stages, had to remain accessible to cars exhibited in the building, and the exterior had to stay essentially unchanged. The architects were later permitted, however, to add a glass wall at one end of the structure and a glazed atrium at the other, where their small upper-level footbridge connects the main building to the former employee cafeteria (now offices).

Completed in 2005 for $27.5 million, the conversion successfully creates open, airy spaces ideally suited to showing cars. Three-inch-thick, structural honeycomb panels, faced in resin-coated aluminum, partially line the vast exhibition area. With exposed steel frames backing bent white walls, the architects created display panels against which automobiles could hang like artworks. As MacFarlane points out, "the wall material, made for aeronautics-industry fuselages, is interestingly flat and light." Suspended from overhead steel trusses, these folded planes, which he describes as "pleated," take on geometries generated by the sawtooth roof's 60-degree angles. Some walls will provide backdrops for image and text projections. "The whole interior can be transformed into a fantastic machine for exhibitions," says MacFarlane, "a cinematic landscape of moving information."

The architects kept Métal 57's mobile gantry cranes, now used for lifting vehicles onto display walls. Jakob + MacFarlane also introduced a series of steel beams, amid the skylights, that not only hold light fixtures, but can also carry the weight of cars suspended in space like hanging mobiles. The inclined display walls lining the exhibition area seem to hover above the floor, distinguishing themselves—like the other interventions—from the existing structure. Underscoring the architecture's industrial origin, Vasconi's concrete portals remain visible in the main hall. In the dialogue between old and new, says MacFarlane, "we consciously stepped back—letting the car be the primary object of desire."

On one side of the east–west exhibition axis are the auditoriums and press facilities, with the offices, seminar rooms, and a 35-car test garage clustered on the opposite side. Wood wall surfaces and carpeting—ranging from ocher to burgundy, giving each inner space a unique identity—impart a sense of warmth. But at the same time, lateral openings in passageways, stairways, and bridges permit views into the main space, creating a complex urban unity. Within the great shed's interior "cityscape," the auditoriums and meeting rooms become small, free-standing buildings in their own right.

The original idea was to open the space to the public a few times a year for exhibitions. Over time, says MacFarlane, the Renault Square Com communications center may invite the public in more often, and expand its program with such functions as art shows. After Métal 57's transformation began, the building became part of an ambitious urban development scheme. The huge surrounding site has been bulldozed, leaving only the oldest Renault building, from 1910. As Parisian land values rise, the area has acquired a master plan for residential and commercial development, office buildings, parks, boardwalks, riverside quays, and a monorail. (None of this, however, will likely become reality in the near future, and Pinault's withdrawal may make the scheme more difficult to realize.)

Reclaiming its last foothold on the site, Renault has recognized the value of maintaining proximity to Paris—and a presence in its greater public forum. (In the city itself, the corporation has a small design atelier, near Place de la Bastille, and since the '90s, a restaurant/exhibition venue on the Champs Elysées.)

In creating an interior urban realm, the architects left Métal 57's most spectacular, central space largely untouched. With honeycomb panels, they in effect inserted a main street. This small, covered city offers a brilliant and economically efficient solution to an otherwise almost intractable problem. Clearly, the daunting size and vast spans of Métal 57 did not intimidate Jakob + MacFarlane. Quite the contrary. ■



Beneath the great sawtooth roof, pleated walls create such intimate spaces as meeting rooms (opposite, right) and alleys (this page). Wood panels partially clad the exteriors of the enclosed volumes (this page and opposite, left).

Foster and Partners tethers the billowing steel SAGE GATESHEAD concert hall to the banks of the Tyne in England

By Suzanne Stephens

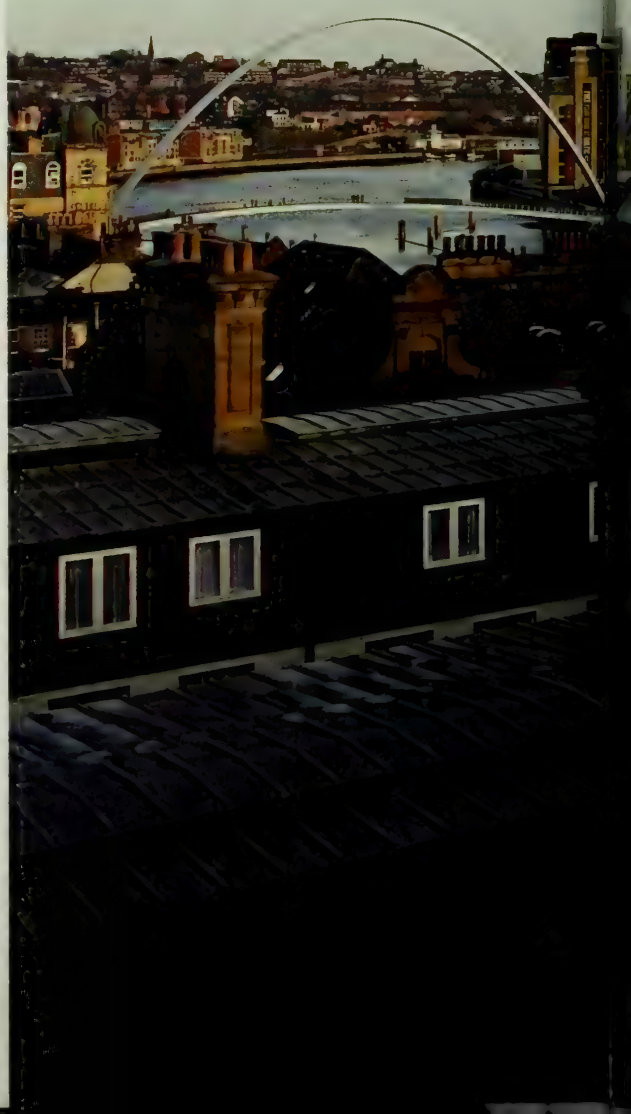
The urban regenerator du jour may not be a museum. More and more, concert halls are getting into the act—performing the functions of creating jobs, attracting tourists, and qualifying for infrastructure grants—as seen by Sage Gateshead in northern England. [For other concert halls in the works, see RECORD, January 2005, page 133]. The town of Gateshead, opposite the Tyne River from Newcastle, and with a population of only 189,000, is counting on the 215,200-square-foot concert hall, designed by Foster and Partners, to bring in at least 600,000 people a year. Along with the nearby Baltic Center for Contemporary Art, housed in a renovated flour mill, and Wilkinson Eyre's dynamically elegant Millennium Bridge, which connects to cafés and hotels on the Newcastle side of the Tyne, this large, gleaming, bulbous performing arts center promises to turn an area once known for coal and shipping into an arts mecca. Already its presence has political ramifications: At its pre-election conference held in the Sage Gateshead this past spring, the Labour Party claimed the newly opened hall as a symbol of its success in bringing economic improvement to the once-blighted area.

Commanding the heights of the south bank of the Tyne, Sage Gateshead's splashy architecture defines itself as an instant icon in the mold of Gehry's Guggenheim Bilbao [RECORD, October 1997, page 74] and his Disney Hall in Los Angeles [RECORD, May 2004, page 44]. Yet it should be noted that calling a work of architecture an icon in Great Britain these days is almost an insult. In the past few months, two books have been published in which architecture critics Deyan Sudjic (*The Edifice Complex: How the Rich and Powerful Shape the World* [Penguin]), and Miles Glendinning (*The Last Icons: Architecture Beyond Modernism* [Graven Images]) have proclaimed or wished for the death of this marketing device; as Glendinning put it, "Architecture has been hijacked by consumerism."

For his part, Charles Jencks defends the trend—under certain conditions. In his book *The Iconic Building* (Rizzoli), also just published, Jencks argues that such symbolic dazzlers have serious roots in Modernism, going at least as far back as Le Corbusier's sculpturally evoca-

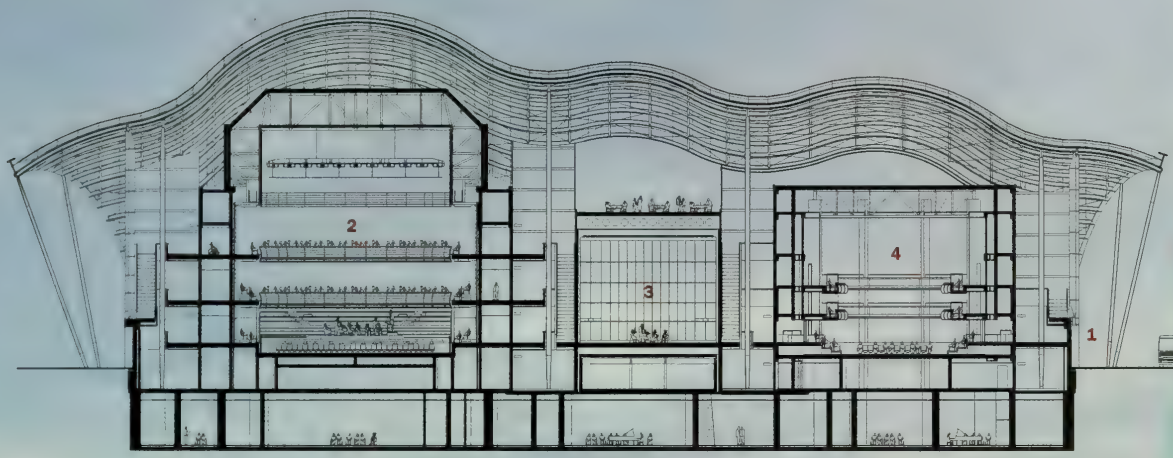
Project: *The Sage Gateshead, Gateshead, Tyne and Wear, England*
Owner: *Gateshead Council*
Architects: *Foster and Partners—Spencer de Grey, partner in charge; Jason Flanagan, project architect; Austin Relton, Stuart Macalister, Iain Fairbairn, George Stowell, Jason McColl, Daniel Goldberg, Armin Buchbinder, project team*
Engineers: *Buro Happold (structural); Connell Mott MacDonald (structural and services)*
Consultants: *Arup (acoustical); Equation Lighting Design (lighting); Desvigne & Dalnoky (landscape)*

As part of a $873 million investment in revitalizing the Newscastle Gateshead communities in northern England, the Sage Gateshead concert hall now joins the Millennium Bridge (left in photo), the Baltic art center (to its right), and new apartment towers (adjacent to the art center), across the Tyne River from the town of Newcastle.



PHOTOGRAPHY: © RICHARD BRYANT/ARCAID, EXCEPT AS NOTED

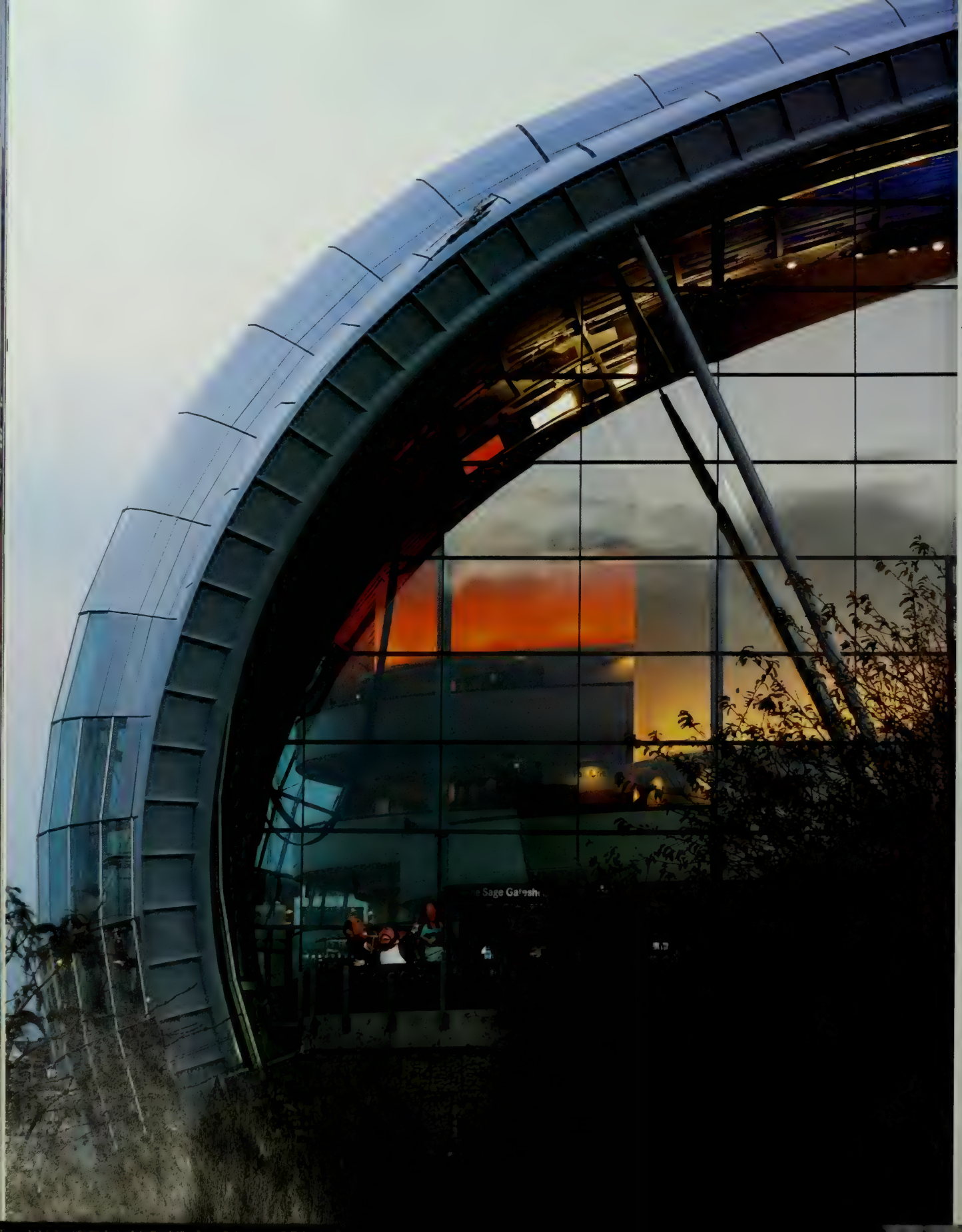
1. *Entrance*
2. *Main concert hall*
3. *Rehearsal hall*
4. *Decagonal hall*



SECTION A-A

0 10 FT.
3 M.

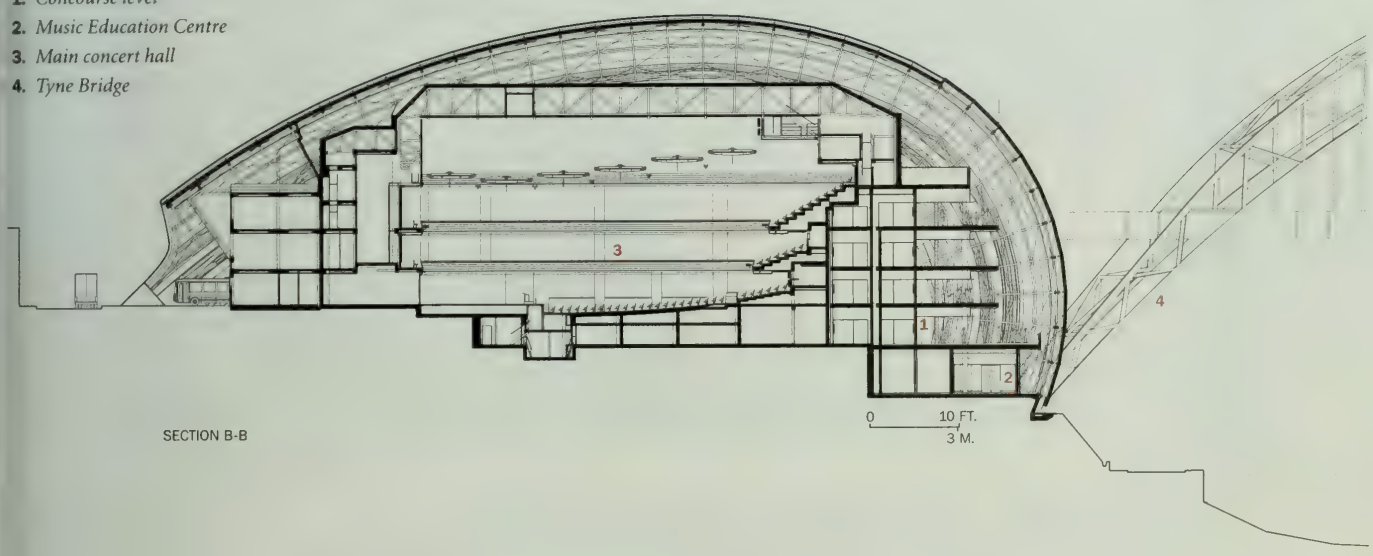




The blimplike structure sits on an area of 86,111 square feet at the top of the south bank of the Tyne River. The roof, clad in stainless steel, rests on four steel arches that extend north–south and are bolstered by slender steel props (opposite); secondary arches overlay the primary ones. The structure echoes the arches of the Millennium and Tyne Bridges (right).



1. *Concourse level*
2. *Music Education Centre*
3. *Main concert hall*
4. *Tyne Bridge*



SECTION B-B

tive Nôtre Dame du Haut at Ronchamp. Sage Gateshead may not aspire to be a Ronchamp, but it demonstrates vividly the characteristics of the iconic building—economically, urbanistically, and architecturally. Indeed, its riveting, engulfing form poses the question: Whereas architecture can always be iconic, is an icon always architecture—architecture with a cap A?

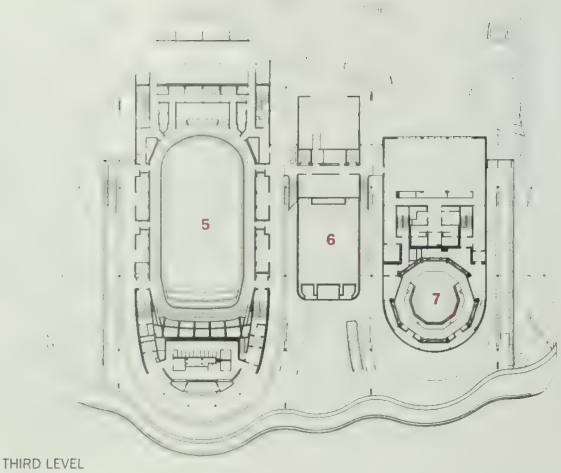
Birth of an icon

The $122 million Sage Gateshead was conceived in 1997 after the Gateshead Council, the city's governing body, held a competition for the concert hall complex. It would be subsidized by an $83 million grant from the Arts Council, grants from One North East, a regional development agency, and the European Regional Development Fund, plus a $10.5 million donation from Sage, a local software company. Of the 100 architects who registered for the competition, 12 were asked to do concept sketches; ultimately, Foster won, out of a shortlist of six firms. This would be Foster's first concert hall, but not the last—since then the firm has been commissioned to design the Winspear Opera House in Dallas, and to renovate Avery Fisher Hall at New York City's Lincoln Center.

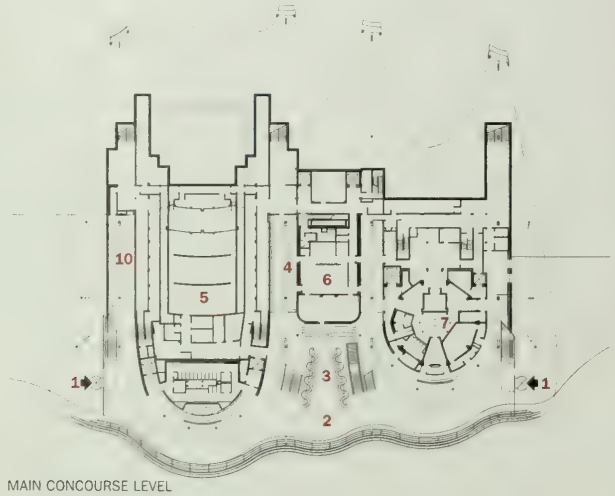
From the start, the Gateshead Council and North Music Trust—which was in charge of the musical organizations coming into the hall—teamed up Foster and Partners, headed by partner Spencer de Grey, with Arup Acoustics, led by Raj Patel and Bob Essert. The players were well-suited for the design of such a project: As a boy, de Grey had lived in Newcastle, where his father taught painting, and Patel had been classically trained on the trumpet before turning to acoustical engineering.

Fleshing it out

After consulting the Northern Sinfonia, the chamber orchestra that would have its home at Sage Gateshead, Patel and de Grey elected to model the shape of the largest space, a 1,700-seat hall, on the acoustically acclaimed classic shoe box of Vienna's Musikvereinsaal, built in 1870. The new, rectilinear hall, with ribbed ash walls and birch ceiling, seats, and balustrades, is distinguished by a rich and reverberant sound. In addition to the wood surfaces, six panels of medium-density fiberboard and plywood, suspended over the stage, can move between 34-foot and 66½-foot heights. To further enhance the acoustics, the team designed the orchestra seating to be located in a shallow parabolic dish. And depending on musical needs, sound-absorbent curtains roll out over the diffusing walls.



THIRD LEVEL

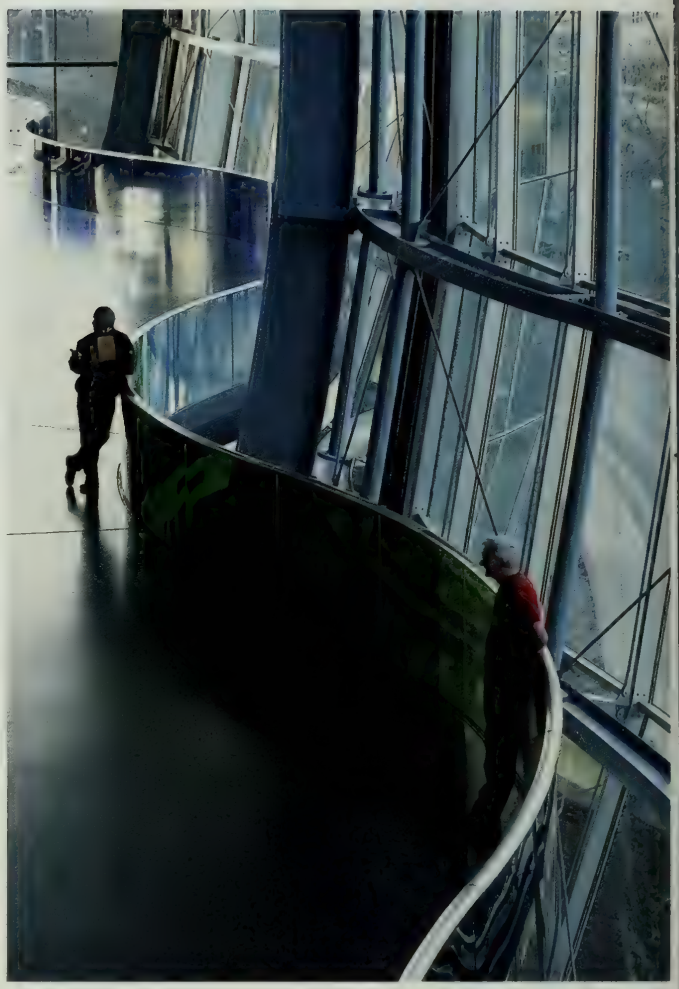


MAIN CONCOURSE LEVEL



LOWER LEVEL

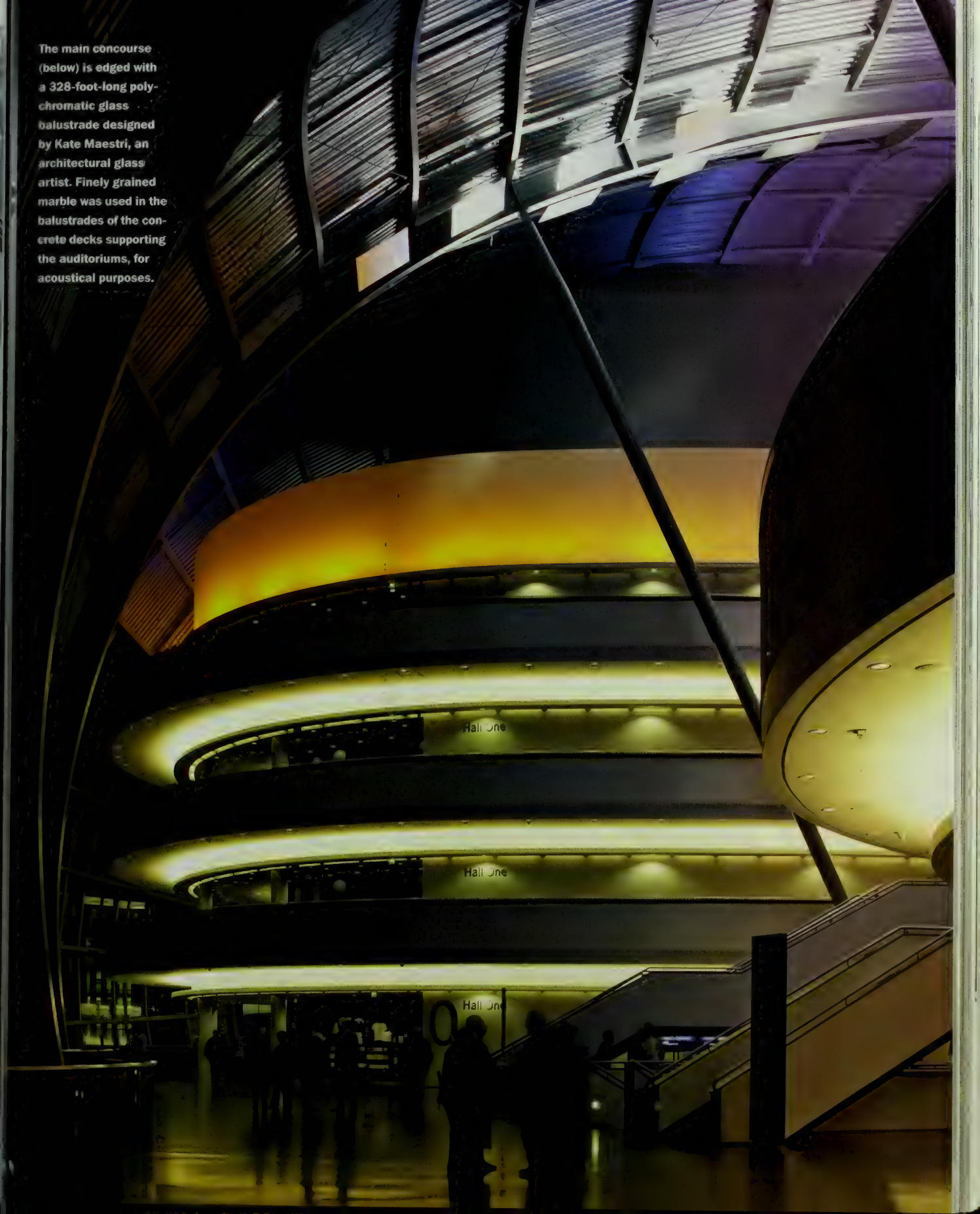
1. *Entrance*
2. *Main concourse*
3. *Café*
4. *Restaurant*
5. *Main concert hall*
6. *Rehearsal hall*
7. *Decagonal hall*
8. *Lobby for Music Education Centre*
9. *Practice rooms*
10. *Research library*



For electronic, jazz, folk, and chamber music, de Grey and Patel devised a 400-seat decagon, a 10-sided performance space lined with plywood panels stained red and articulated with ash dowels, also stained red. Between the two is a rehearsal hall (named the Northern Rock Foundation Hall), which can be used for concerts or as a recording studio. On the floor below the halls, the Music Education Centre, with 26 practice and performance spaces, is linked by a sinuous lobby that also overlooks the Tyne.

To guarantee acoustical isolation, Foster treated the auditoriums and other spaces as distinct units with concrete-frame structures and concrete-block infill. The spaces in between the concrete units are devoted to circulation, all enclosed by the soaring, curvaceous stainless-steel-and-glass shell, also a structurally separate entity. Curving balconies girdling the auditoriums bulge out into the lobby like huge white ships in dry dock within the cavernous space, which soars as high as 130 feet.

In creating this gargantuan shell of 3,000 flat, stainless-steel panels and 280 glass panels with a low-E coating, the team, which included structural engineers Buro Happold, headed by Mike Cook, specified a linen finish on the stainless-steel panels to reduce glare. Furthermore, an interior filling of rigid foam insulation diminishes drumming sounds from the rain. Four steel primary arches placed between the main halls and spanning 262 feet from the esplanade wall to the rear of the site support this carapace, supplemented by slender steel props. Secondary arch members, running in the east–west direction, overlay the primary arches to generate the interlocking toruslike forms, which are further stiffened with



The main concourse (below) is edged with a 328-foot-long polychromatic glass balustrade designed by Kate Maestri, an architectural glass artist. Finely grained marble was used in the balustrades of the concrete decks supporting the auditoriums, for acoustical purposes.

In the major hall, with 1,700 seats (above), the ribbed ash walls help sound diffusion. Seats, ceilings, and balustrades are birch, and air supply comes through the metal pedestals of the chairs. The 400-seat decagon (near left) is designed for a variety of music, and its plywood walls with ash dowels are stained red. The lobbies for the auditoriums (opposite) and the corridor for the Music Education Centre (far right) overlook the Tyne.







tertiary struts and diagonal bracing. Parametric computer modeling helped give birth to a steel grid shell that weighs a hefty 720 tons.

Achieving the gestalt

In terms of acoustics, the auditoriums have generally met with enthusiasm from the critics. As an architectural object, Sage Gateshead sits calmly and eerily, like a moored blimp, among the chimney pots and Victorian spires and iron bridges of this 19th-century industrial town. All in all, the behemoth projects a benign presence, as if designed by someone inspired both by 19th-century conservatories and Archigram's 1960s Plug-in Cities. Shiny steel curves of the techno-organic form speed the gestalt. But its broad, bulbous mass would look clunky on a flat site or in a more urbane context. It needs the gritty city feel of these higgledy-piggledy ramparts.

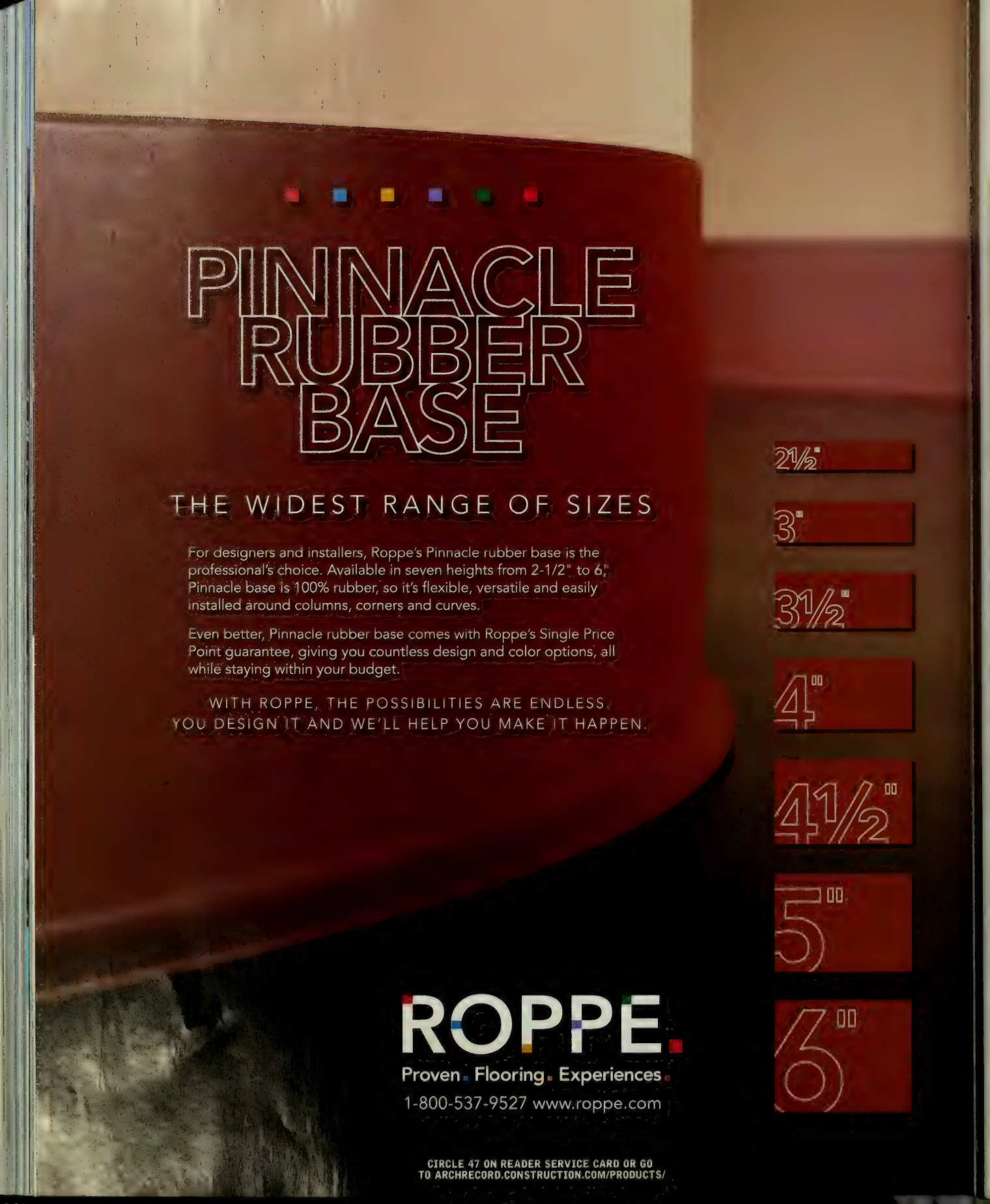
Indeed, its success architecturally owes largely to the variegated setting rather than to its posing a solution that might inspire other performing arts centers. Here, it doesn't matter that there is no grand entrance, for example, since the Sage Gateshead's site discourages entering from the steep bank. Here, too, the flat-footedness between the roof form and the base is covered by vegetation; where it's not, such as the rear, the architects designed the roof surface to evoke tentlike tails anchored to the slope—a klutzy touch when done in hard materials.

Other such gestures as the ziggurat patterns of the glazing, the airplane-hangarlike scale of the lobby, and the brusquely handled undercroft of the roof lack the refinement of Foster's big hits of the past. (Yes, a higher budget would have helped.) Ironically, the Millennium Bridge—a work of engineering—offers a better instance of exquisite line and delicate proportions than Sage Gateshead. So being an icon isn't easy. The softly gleaming, sinuous, large-scale, eye-catching features guarantee it will be iconic. But in the end, large gestures need to be backed up by lots of small, delicate moves for an icon to become a full-fledged work of architecture. ■

Sources

Stainless-steel envelope and curtain wall: *Waagner Biro Stahl-Glas Technik*
Resin terrazzo floor: *Standaart Flooring*
Rubber flooring and carpet: *Durastic*
Timber flooring: *Watson-Brook*
Main hall seating: *Fugueras International Seating*
Timber acoustic wall cladding: *Abrahams and Carlisle*
Acoustic fabric lining: *Eomac*

For more information on this project, go to Projects at **www.architecturalrecord.com.**


PINNACLE RUBBER BASE
THE WIDEST RANGE OF SIZES
For designers and installers, Roppe's Pinnacle rubber base is the professional's choice. Available in seven heights from 2-1/2" to 6", Pinnacle base is 100% rubber, so it's flexible, versatile and easily installed around columns, corners and curves.
Even better, Pinnacle rubber base comes with Roppe's Single Price Point guarantee, giving you countless design and color options, all while staying within your budget.
WITH ROPPE, THE POSSIBILITIES ARE ENDLESS.
YOU DESIGN IT AND WE'LL HELP YOU MAKE IT HAPPEN.
2½"
3"
3½"
4"
4½"
5"
6"
ROPPE.
Proven. Flooring. Experiences.
1-800-537-9527 www.roppe.com
CIRCLE 47 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Rethink: Corridor

Maybe it bends like a dancer's back. Or meanders like a trout stream. When you have the right materials, a corridor can be whatever you want. To give you flexibility, Pittsburgh Corning Glass Block comes in a wide array of shapes and patterns. It's easy to install, too. So go ahead, rethink. Follow the contours of your imagination. Wherever it starts, wherever it leads, we'll be sure to follow.

At right, Nitschke Auditorium, University of Toledo
Architect: Smith, Hinchman & Grylls Associates, Inc.



To see more examples of rethinking, go to www.pittsburghcorning.com/architects. Or call 1-800-624-2120, ext. 800.

PITTSBURGH CORNING GLASS BLOCK®

Think again.

CIRCLE 48 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



You've designed your own exposed connectors for years.

It's break time.

You've always had to custom-design connectors for exposed residential and commercial wood framing, then have them fabricated and finished. Now you can simply specify them. The new **Architectural Products Group** from Simpson Strong-Tie® offers a wide range of prefinished connectors that combine load-rated structural integrity with decorative architectural detailing. To see the full line visit our Web site, or call 866.860.9011 to learn more.

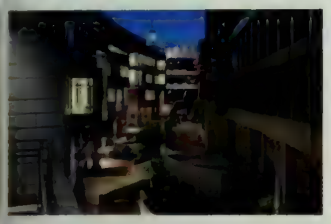
SIMPSON Strong-Tie™

www.ExposedConnectors.com/Details14

CIRCLE 49 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Meeting Places

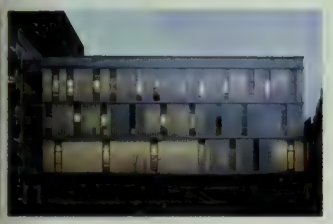
AS UNIVERSITY CONSTRUCTION REMAINS STRONG, PLANNERS ARE LOOKING CLOSELY AT HOW NEW PROJECTS CONTRIBUTE TO THE OVERALL CAMPUS FABRIC AND FEEL.



1.

Cincinnati, Ohio

Moore Ruble Yudell and Glaserworks weave a handsome student center into the heart of a campus studded with signature architecture.



2.

Cambridge, Massachusetts

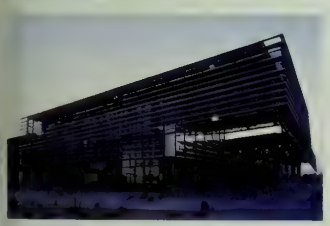
Just north of Harvard Yard, Leers Weinzapfel Associates places three small, elegant additions atop Josep Lluís Sert's 1970 Science Center.



3.

Olympia, Washington

A new green academic building by Mahlum Architects embodies the spirit of a school known for environmental and social responsibility.



4.

Chandler, Arizona

At a growing community college, Architekton adds a centrally located, casual gathering space for faculty and students.

For more information on these projects, go to Building Types Study at **www.architecturalrecord.com**.

By Deborah Snoonian, P.E.

In the 1989 film *Field of Dreams*, the main character, Ray Kinsella, is compelled to build a baseball diamond in his Iowa cornfield when he repeatedly hears a whispered, insistent mantra: "If you build it, they will come." One wonders, given the huge number of college and university projects that have crossed our desks in the past three years, if campus planners have been hearing the same voice. As Nancy Levinson and James Russell, AIA, pointed out in RECORD's August 2004 issue, which focused on university architecture, buildings have taken on the recruiting role long played by search committees, development offices, and enthusiastic alumni—they're expected to be multitasking, dynamic, and able to attract top-notch students and faculty.

Yet what happens once those folks show up? New student housing and state-of-the-art research labs certainly play well during tours and on the pages of glossy brochures, but let's face it—not every student gets to live in the latest dorm, and not every professor benefits from specialized facilities. As Levinson explained in "Campus Planning Is Breaking New Ground" [RECORD, August 2004, page 86], architects and facility managers in higher education are executing long-term master plans that emphasize landscape, open space, and community presence and engagement, all with an eye toward establishing that intangible "quality of life."

In various ways, the four projects shown here depend on apt programming, siting, and design in the service of this goal. The University of Cincinnati, which has tapped a number of star architects for projects over the past 15 years, recently opened a student life center that knits these buildings together, acting as a gateway, gathering spot, and "home base" that students leave from and return to as they go from classes to extracurricular activities to socializing. The student center at Chandler-Gilbert Community College in Arizona serves a similar function, and its flexible indoor/outdoor space has already proved popular for informal get-togethers between faculty and students. Instead of sealing off the history of science department at Harvard University's Science Center, a new wing incorporates not one but two public exhibition spaces for displaying its rich collection of scientific artifacts. Finally, at The Evergreen State College in Olympia, a school known for its progressive politics, a series of semidetached green buildings form a pleasant "quad," with one structure containing a public-information center for those who want to learn about the school and the environmental features of the new buildings.

In *Field of Dreams*, former ballplayers show up for one last game after Kinsella built his diamond. These schools are hoping for more—they want everyone not only to show up, but to stay for a while. ■

Joseph A. Steger Student Life Center
Cincinnati, Ohio

1 **MOORE RUBLE YUDELL AND GLASERWORKS INSERT A LONG, DYNAMIC STRUCTURE INTO A TIGHT SITE, BINDING A CAMPUS AND COMMUNITY TOGETHER.**

By Jayne Merkel

Architect: *Moore Ruble Yudell Architects & Planners—Buzz Yudell, FAIA, partner in charge; John Ruble, FAIA, partner; Mario Violich, principal in charge; Adam A. Padua, Assoc. AIA, project manager, associate in charge*
Architect of record: *Glaserworks—Arthur A. Hupp, AIA, principal in charge; Steve Haber, AIA, project manager; Michael A. Moose, AIA, design liaison; Michael Maltinsky, construction administration*
Client: *University of Cincinnati—Joseph A. Steger, president; Ron Kull, university architect; Greg Robinson, project manager*
Engineers: *Arup and THP Limited (structural); Arup and Heapy Engineering (m/e)*
Consultants: *Hargreaves Associates (landscape); Kolar Design and Marcia Shortt Design (environmental graphics); Brashear-Bolton (codes)*
General contractor: *Messer/Jacobs*

Size: *85,000 square feet*
Cost: *$21 million*
Completion date: *April 2004*

Sources
Metal/glass curtain wall: *Waltek & Company*
Masonry: *Belden*
Zinc paneling: *Umicore Building Products*

For more information on this project, go to Building Types Study at www.architecturalrecord.com.

For more than a decade, the University of Cincinnati has endeavored to create a campus fit for full-time students at what was once mostly a commuter college. Now, tucked into the heart of the school's academic campus, the Joseph A. Steger Student Life Center establishes connections via enclosed pedestrian paths, arcades, passageways, and terraced gardens. The architects embraced a difficult site stylishly, bringing a rugged, up-to-date urbanity with a West Coast flavor to the Midwest by overlapping interior and exterior spaces, employing lots of natural light, and boldly juxtaposing brick, metal, and concrete surfaces.

Program

In 1989, the university implemented a Signature Architects Program intended to put the school on the national map with brazen new buildings by architects such as Frank Gehry, Peter Eisenman, and Michael Graves. Late in the 1990s, the second phase of this program began; unlike the first, its goal is to provide a "quality of campus life" the school still lacked. A 2000 master plan by landscape architect George Hargreaves envisioned a lively pedestrian "Main Street" in the middle of campus that would act as an antidote to the earlier emphasis on isolated academic buildings. The Steger Center was commissioned and built under this rubric. Sited on a long, narrow lot that was once a driveway, the center's program called for a student health center, coffee shop, student organizations, and computer lab, and was intended to connect open spaces and existing buildings with the renovated Tangeman University Center (the student union) by Gwathmey Siegel and GBBN, and the new Student Recreation Center by Morphosis and KZF.

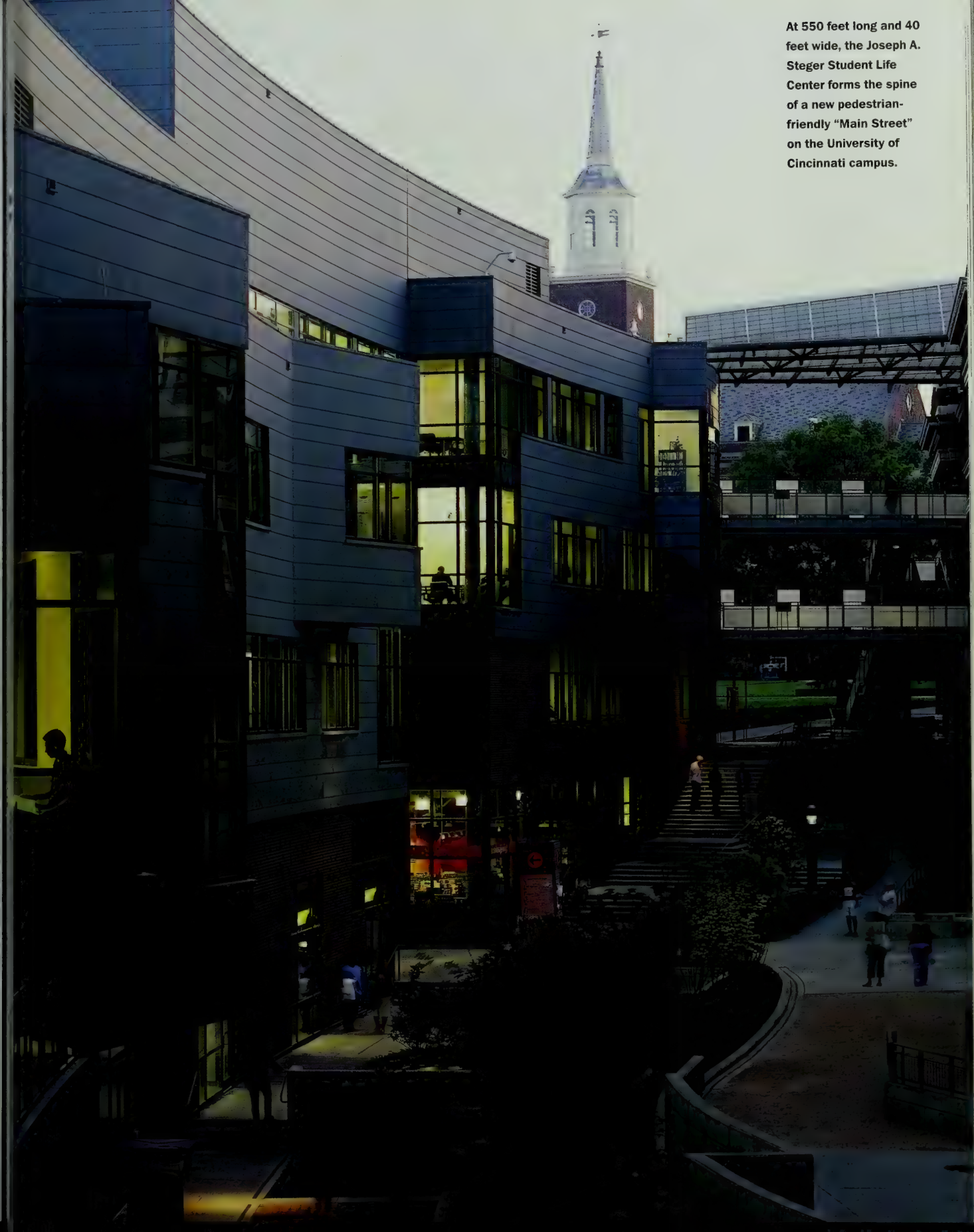


1. *Joseph A. Steger Center*
2. *Swift Hall*
3. *Tangeman University Center*
4. *Student Recreation Center*
5. *Richard E. Lindner Varsity Village*
6. *College-Conservatory of Music*
7. *University Pavilion*
8. *Engineering Research Center*

Solution

The center's zinc-clad, arc-shaped exterior echoes a zinc-faced element on Tangeman to the south. Its red-brick base picks up on Tangeman's neo-Georgian facade and on Swift Hall, a 1920s classroom building to the north that the designers renovated and connected to the center with a skylit canopy. Terraced paths lead down to the Student Recreation Center, which bends around the historic football stadium beside it.

Jayne Merkel, whose monograph on Eero Saarinen will be published in September, is a former architecture critic of The Cincinnati Enquirer.



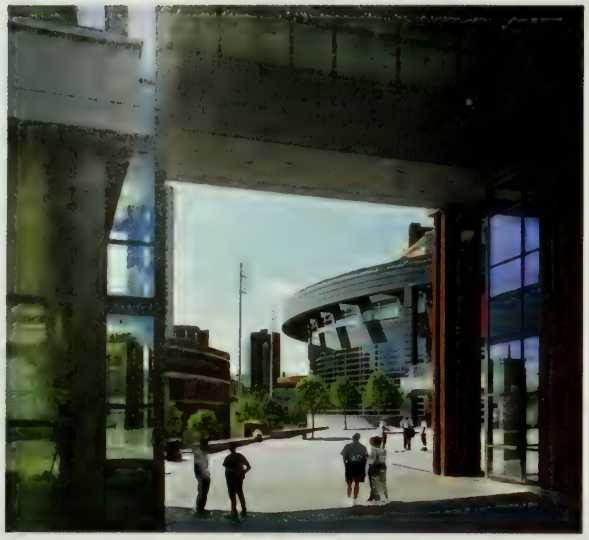
At 550 feet long and 40 feet wide, the Joseph A. Steger Student Life Center forms the spine of a new pedestrian-friendly "Main Street" on the University of Cincinnati campus.



Sweeping terraces and expansive staircases surround the Steger Center, leading to the Tangeman University Center (at left in photo, right) and the renovated Swift Hall, connected to the center by a canopy (below). Offices and student organizations on the center's north side overlook landscaped terraces and walkways that meander down a 55-foot grade (opposite).







Passageways through the Steger Center frame views of other campus buildings and serve as informal gathering spaces (left).



SECOND LEVEL



FIRST LEVEL



GROUND LEVEL

1. *Entry*
2. *Public space*
3. *Circulation*
4. *Office*
5. *Swift Hall*
6. *Computer lab*
7. *Mechanical/ service room*

N 0 50 FT. 15 M.

Under Hargreaves's master plan, now the university first hires a local firm as architect of record for new projects, and together they select out-of-town designers for their team. For the Steger Center, Glaserworks chose Moore Ruble Yudell because "when you look at their buildings, you feel the urge to run up the stairs, or pause on a landing before you descend. Their architecture invites involvement," said Glaserworks principal Mike Moose, AIA.

The Steger Center curves outward toward the campus green and the football stadium as it snakes down a 55-foot grade. On that expansive south side, a ground-floor loggia opens onto stepped outdoor seating. Inside, the rugged indoor/outdoor atmosphere is maintained as exposed concrete columns parade down narrow corridors with cozy window seats overlooking the action on campus. Since the building is only 40 feet wide, offices and student services occupy only the north side of the upper floors, where they overlook terraced gardens opening onto a ground-level art gallery, sandwich shop, and computer store.

Throughout the project, Moore Ruble Yudell and Glaserworks worked closely with the designers of Tangeman and the Student Recreation Center, meeting in person and sharing drawings on a project Web site "so that each team could mesh parts of their projects with its neighbors," Moose recalled.

Commentary

Building the center on residual space presented a significant challenge; the design team had to "surgically inscribe the building into the campus fabric," said Mario Violich, the project architect for Moore Ruble Yudell. This process enabled them to create real density on the hilly 137-acre campus. They made the most of the long, winding site by echoing forms of nearby buildings while putting a unique twist on their shapes with sharp angles and emphatic changes in grade. The result is a building that is both formally and programmatically dynamic. ■

The designers capitalized on a narrow floor plate and a long southern elevation by bringing in natural light to all corners of the building, even stairwells (right). Extensive glazing also reinforces the indoor/outdoor connection between the center and the rest of the campus. Touches of bright color animate the hallways and offices without overwhelming those spaces (far right and below).







Harvard University Science Center Expansion

Cambridge, Massachusetts

2 **LEERS WEINZAPFEL ASSOCIATES FRESHENS UP AN ICONIC BUT TOUGH CONCRETE BUILDING WITH LIGHT-FILLED ADDITIONS OF GLASS AND STEEL.**

By Deborah Snoonian, P.E.

Architect: *Leers Weinzapfel Associates Architects—Andrea P. Leers, FAIA, principal; Winifred Stopps, AIA, project manager; Alexander Carroll, AIA, project architect and construction manager*
Engineers: *Arup (structural, m/e/p)*
Consultants: *Stephen Stimson Associates (landscape); Cavanaugh Tocci Associates (acoustics); Berg/Howland Associates (lighting); Kessler McGuinness and Associates (accessibility); Hanscomb Faithful & Gould (cost)*
General contractor: *Linbeck*

Size: *26,800 square feet (additions); 38,700 square feet (renovated areas)*
Cost: *Withheld*
Completion date: *April 2004*

Sources
Metal/glass curtain wall: *Pilkington*
Aluminum windows: *EFCO*
Skylights: *Supersky*
Fire-rated glass: *GPX*
Glazed partitions: *Wilson Partitions*
Entry doors: *EFCO*
Cabinetwork and custom woodwork: *Fabrizio Corporation*
Paints and stains: *Sherwin Williams*
Carpet: *Shaw*
Resilient flooring: *Marmoleum*

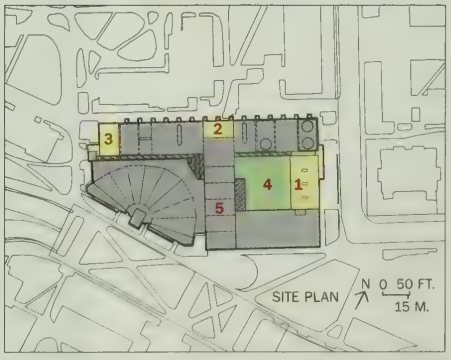
For more information on this project, go to Building Types Study at www.architecturalrecord.com.

Josep Lluís Sert's tenure as chair of Harvard's Graduate School of Design in the 1950s and '60s coincided with a period of growth and expansion for the entire school. His Harvard University Science Center, completed in 1970, extended the school north of Harvard Yard for the first time and has served as the de facto gateway to this area of the campus ever since. A few years ago, the Boston firm Leers Weinzapfel Associates was tapped to add more space to the existing 291,000-square-foot structure. The elegant, thoughtful additions, which peek out from behind the building when viewed facing the terraced south facade and main entry, pay homage to the form and scale of Sert's original while updating its massing and materials.

Program

A number of departments housed at the Science Center, including statistics, computer science, and the history of science, needed updating as well as more space for classrooms, labs, and administration. In addition, most of the history of science department's prized collection of some 15,000 scientific instruments, dating from as early as 1450, was squirreled away in a dusty basement far from the public's eye. Recognizing an opportunity to raise the profile of what is already one of Harvard's most popular programs, the chair of the department asked the architects for exhibition space to display the collection.





1. *History of science*
2. *Statistics*
3. *Computer science*
4. *Courtyard*
5. *Existing building*

Besides the additions, Leers Weinzapfel renovated an even larger portion of the interior of the building, including the replacement of leaky, single-glazed atria with up-to-date glazing systems. They also revamped the Science Center's pleasant courtyard with casual seating along with seasonal flowers and plantings.

Solution

With no space at the site for horizontal expansion, there was nowhere to go but up, up, up (yes, three times). Leers Weinzapfel designed one two-story rooftop addition for the computer science department; a second for statistics; and a third, three-story volume atop a revamped first floor on the east terrace of the building for the history of science department.

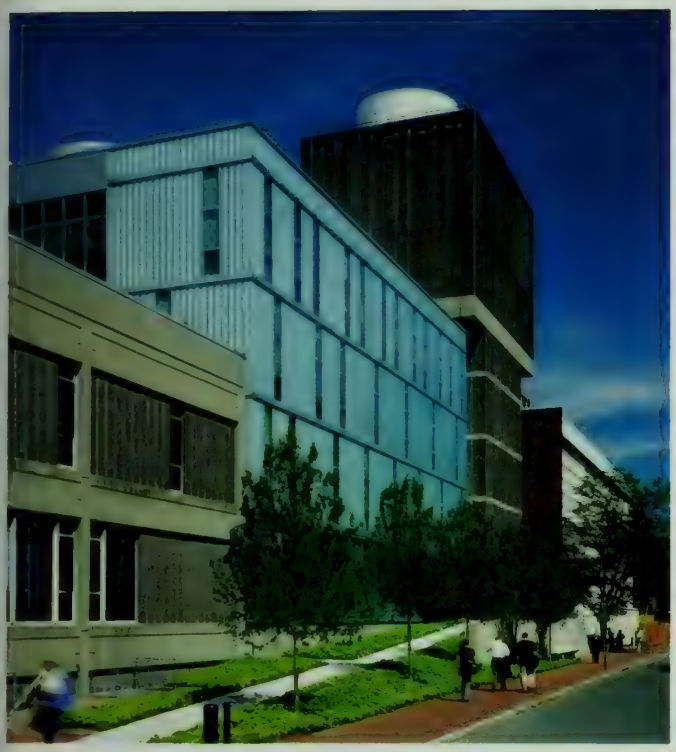
Fashioned in channel glass, clear glass, and steel, these new volumes seem to sit lightly on Sert's sturdy concrete base, yet manage to hold their own weight. The vertical pattern of the metal-and-glass facades brings to mind computer

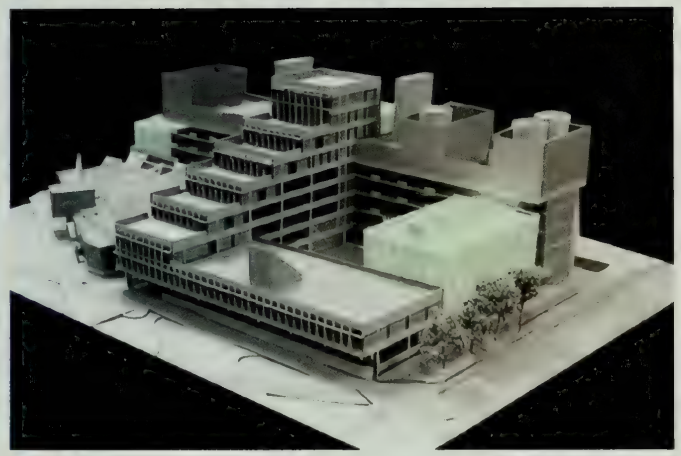


The computer science wing, which sits above a popular entry for the Science Center, gleams against the backdrop of Sert's concrete volumes (this page). The history of science wing harmonizes nicely with the center's terraced orthogonal masses (opposite).



The earthwork behind a low concrete wall at the ground floor of the history of science wing lends lateral stability, which helped the existing foundation to support an additional three stories.





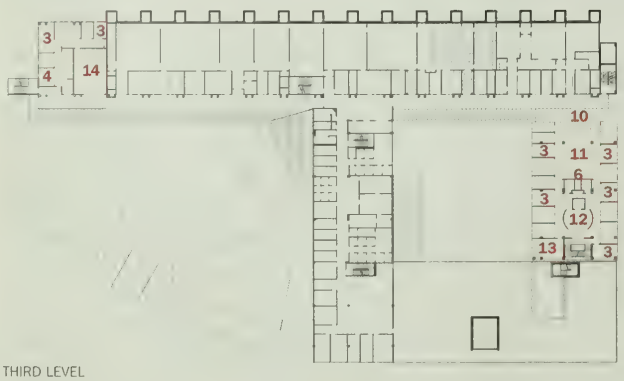
The history of science wing is located along a popular pedestrian route that leads to the north portion of Harvard's campus (left). Its west facade overlooks the courtyard, where the school community enjoys dining al fresco on sunny days (below). A model shows where the additions lay (above); Sert himself is believed to have considered the east and west terraces of the center ripe for expansion.



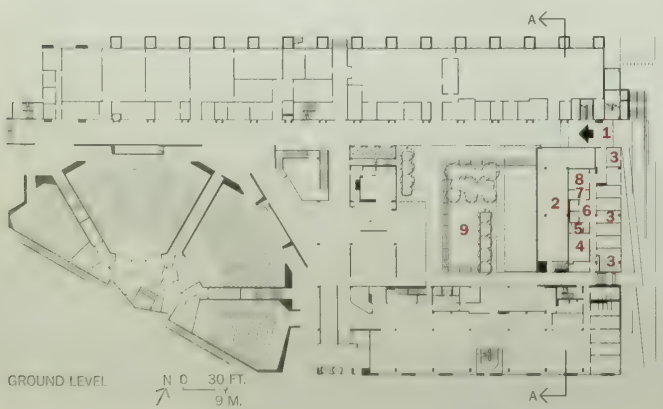




SECTION A-A



THIRD LEVEL



GROUND LEVEL

1. *Entry*
2. *Exhibition space*
3. *Private office*
4. *Conference room*
5. *Kitchen*
6. *Bathroom*
7. *Storage*
8. *Workroom*
9. *Courtyard*
10. *Reception*
11. *Open-plan office*
12. *Common room*
13. *Seminar room*
14. *Classroom*
15. *Bridge*
16. *Conservation lab*

punch cards (now obsolete) and gene sequences (very of-the-moment)—apropos images for a science building.

The additions for computer science and statistics consist simply of offices and classrooms with furniture that can be configured into various seating arrangements. The history of science wing proved more complex, both programmatically and structurally. To make way for it, Leers Weinzapfel razed a single-story section of the Science Center that topped a basement mechanical room that could not be shut down or relocated. The designers worked with engineers from Arup to bolster the existing foundation so it could support four stories instead of one, which required piling earth against the ground floor for lateral stability, and other tricky engineering maneuvers.

In this new wing, glass walls enclosing the ground-floor permanent exhibition space allow even casual passersby to peer at curious techno-gadgets from bygone eras. A double-height atrium and stair connect this floor to the one above, where a preservation lab for the collection's artifacts is bisected by a second public exhibition area. Faculty, staff, and graduate students enjoy more privacy in the upper two floors, which have more windows than the lower floors and were designed with glass partitions so that natural light can filter in as deeply as possible.

Commentary

Breaking down the additions into three volumes was a wise way to resolve both formal and programmatic issues; one can easily see how a single, larger addition could have thrown off the precarious balance of Sert's dynamic volumes, not to mention the possibility of creating departmental turf wars. While sleek additions sometimes make older buildings seem shabby in comparison, these do the opposite, enlivening the center and helping it age gracefully. The interiors, while lacking pizzazz in some places, are handsomely crafted and finished. ■



A bridge and double-height reception area create a sense of connection and enclosure for two floors of offices in the history of science wing (this page). Red panels perk up the second-floor exhibition space, where visitors can look beyond glass displa cases into the preser tion lab (opposite)

Seminar II Building, The Evergreen State College
Olympia, Washington

3

MAHLUM ARCHITECTS DESIGNS FIVE LINKED STRUCTURES THAT FORM AN INTIMATE LEARNING COMMUNITY AND PRESERVE A FORESTED SETTING.

By John Pastier

Architect: *Mahlum Architects—Anne Schopf, AIA, design principal; Michael Patterson, AIA, project manager; Mark Cork, AIA, Benjamin Doty, AIA, project architects*
Client: *The Evergreen State College*
Engineers: *AHBL (structural); Keen Engineering (mechanical modeling); Wood Harbinger (mechanical systems); SvR Design (civil); Sparling (electrical)*
Consultants: *Murase Associates (landscape); Candela (lighting); The Greenbush Group (acoustical and a/v)*
Contractor: *DPR Construction*

Size: *168,000 square*
Cost: *$32.5 million*
Completion date: *September 2004*

Sources
Concrete: *McClone Construction*
Exterior composite-wood paneling: *Finland Color Plywood*
Green roofs: *Garland*
Channel glass: *Pilkington*
Skylights: *Kawneer*
Aluminum windows: *Kawneer*
Acoustical ceilings: *Armstrong*
Raised flooring: *Interface Architectural Resources*
Cork flooring: *Expanko*
Carpet tiles: *Collins & Aikmen*
Fabric wall coverings: *Maharam*

For more information on this project, go to Building Types Study at www.architecturalrecord.com.

While not the newest campus in Washington's public higher-education system, The Evergreen State College is still the state's most experimental and unconventional one. The school offers intriguing multidisciplinary courses, subject concentrations rather than academic majors, and personalized evaluations in lieu of letter grades. Environmental advocacy and social responsibility lie at the core of many of its programs. Founded in 1971 and sited in a secluded, forested setting near Olympia, the school's concrete Brutalist buildings, typical of college architecture of the era, were built before Evergreen's identity was clearly defined. The Seminar II Building, designed by Seattle's Mahlum Architects, is the first major new structure on campus in 33 years and the first to properly reflect and serve its academic program.

Program

The university wanted a multifunctional building on an infill site southeast of the library and the main campus plaza, known affectionately as "Red Square." The building's program was ambitious, encompassing lecture halls, classrooms, seminar rooms, faculty and administrative offices, informal breakout spaces, outdoor teaching areas, labs, studios, and a café. School officials mandated that the structure be both flexible and sustainable, incorporating daylighting and natural ventilation and preserving the natural setting.

John Pastier is a Seattle-based architectural writer whose work has been published in the U.S. and abroad.



Solution

Mahlum Architects accommodated the complex program in five linked, nearly identical, semi-independent buildings, or academic clusters, totaling 168,000 square feet. Three of the clusters reflect the main campus grid, whereas two are aligned with the compass to offer views of the site and capture daylight.

To a large extent, the arrangement of spaces within each cluster is simply the program's bubble diagram stacked vertically. Lecture halls, workshop areas, outdoor classrooms, and breakout spaces occupy the ground levels; the upper floors contain offices, green roofs, and a variety of teaching spaces, studios, labs, and formal and informal gathering areas. Open central shafts line one side of the main corridor of each cluster, providing natural light and ventilation and establishing visual links among different floors and programs.

The buildings take a rigorously orthogonal form, with nary a whimsical angle, curve, or gestural arc. Cast-in-place concrete dominates

Seminar II's five linked structures are arranged in a finger-like plan to preserve the site (photo, right, and plan, opposite). Generous expanses of windows and channel glass break down the orthogonal masses of concrete (below).





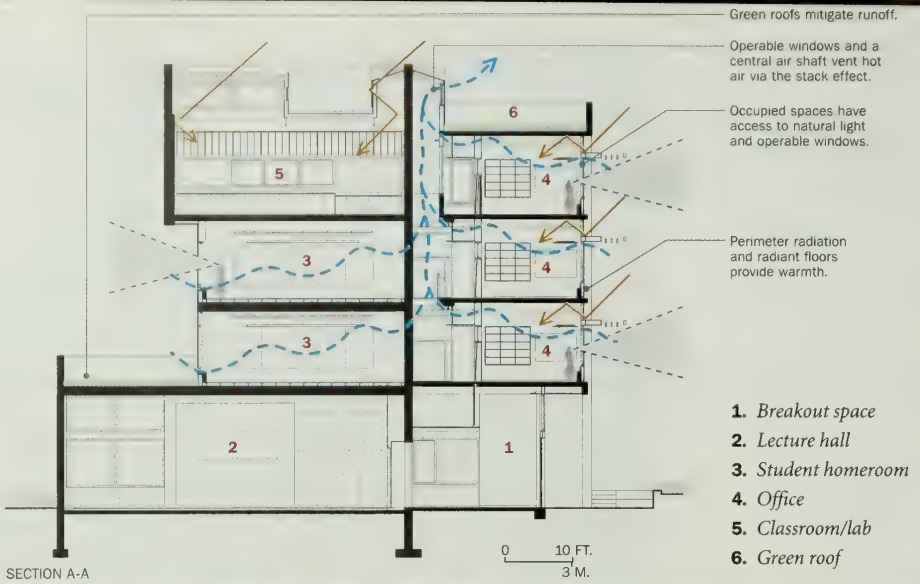
the exterior and interior material palette. Outside, the concrete is softened in places by windows, stairwells enclosed in channel glass, metal light shelves and brise-soleils, and warm-toned composite-wood panels. Inside, the architects added warmth and texture by using cork and carpeted floors in classrooms and offices, along with alder-wood accents on doors, trim, and ceilings.

The designers achieved sustainability through several means. The green roofs on each cluster, and an on-site detention pond, absorb most runoff. Eighty percent of the building is naturally ventilated, and occupied spaces have access to natural light via operable windows. Vertical and horizontal sunshades prevent heat gain during warmer months, while the concrete mass of the building also acts as a heat sink to keep things cool inside. Robert Murase's landscaping, which relies on native plantings, requires no irrigation.

Commentary

Seminar II epitomizes Evergreen State's esprit de corps better than any other building on the campus, and the school community has embraced it. Rob Knapp, a physics professor who helped administer the project, says, "The teaching spaces are inviting and pleasant, and they help retain the students' attention. The big surprise was how beautiful it is. We didn't expect the beauty of the proportions, materials, and spaces, treated with such care. We've managed to get a building with lots of poetry in it."

The poetry is undeniable, but often subtle and spare. Seminar II is like a gifted but strict teacher—an asset to the school community, but sometimes lacking in warmth. Some touches of applied color inside, or even a bit of ivy on the exterior, would help. This proudly Cartesian building cluster is a rigorous and tough-minded design exercise, but it delivers the goods. It's an apt metaphor for academic seriousness, which will help dispel a common perception among outsiders that Evergreen State is a "touchy-feely" school. ■



SECTION A-A

1. *Breakout space*
2. *Lecture hall*
3. *Student homeroom*
4. *Office*
5. *Classroom/lab*
6. *Green roof*



1. *Entry*
2. *Breakout space*
3. *Lecture hall*
4. *Workshop area*
5. *Office*
6. *Student homeroom*
7. *Seminar room*
8. *Green roof*
9. *Classroom/lab*



A system of open walkways, stairs, and bridges link the five structures (opposite), and outdoor classrooms and gathering areas feature a landscape design of native species. Accents of alder wood help to soften the interior spaces (right). Students and faculty enjoy abundant natural light and outdoor views from inside, even from classrooms (below).





Chandler-Gilbert Community College Student Center

Chandler, Arizona

4

ARCHITEKTON DESIGNS A FRONT PORCH FOR A GROWING CAMPUS, CREATING AN INDOOR/OUTDOOR ROOM WHERE STUDENTS AND FACULTY CAN GATHER.

By Clifford A. Pearson

Architect: *Architekton—John Kane, AIA, design principal; Douglas Brown, AIA, managing principal; Christopher Kelly, senior design architect; Bill Osborne, project manager; Nick Nevels, project architect*
Client: *Maricopa County Community College District*
Interior designer: *Knipp Design Associates*
Engineers: *Martin, Peltyn & Gordon (structural and civil); Energy Systems Design (m/e/p)*
Consultants: *Terrano Landscape Architects (landscape); R.C. Lurie (lighting); Thinking Caps Design (signage/wayfinding)*
General contractor: *Brignall Construction*

Size: *20,000 square feet (conditioned); 30,800 square feet (total)*
Cost: *$2.2 million*
Completion date: *Spring 2003*

Sources
Masonry: *Western Block*
Curtain wall: *Arcadia*
Elastomeric roofing: *Carlisle*
Glass: *Old Castle*
Garage doors: *Clopay*
Ceiling fans: *Big Ass Fans*

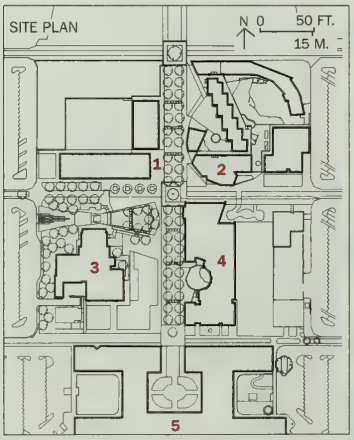
For more information on this project, go to Building Types Study at www.architecturalrecord.com.

Part of the enormous Maricopa Community Colleges, which comprise 10 campuses and 280,000 students, Chandler-Gilbert Community College (CGCC) serves the fast-growing East Valley of Phoenix. During the past decade, the area has traded agricultural jobs for employment in light manufacturing and high-tech industries, doubling the size of the city of Chandler since 1990 and fueling demand for educational facilities of all kinds.

Program

Like many schools that have expanded quickly, CGCC had emphasized classroom buildings and specific-use facilities such as libraries, gyms, and arts centers. But its Pecos campus (one of three in the college) had no space where students and faculty could come together in an informal setting. A three-day programming charrette, run by the Tempe-based firm Architekton, showed the need for a relaxed place that could accommodate a broad range of uses—from offices for career placement and student-life organizations to a venue for socializing and celebrations.

Since the first buildings opened in 1986, the school had expanded rapidly to the north, leaving the original social hub (a courtyard and classroom building) at what is now the south edge of campus. "We did a heart transplant," explains John Kane, AIA, Architekton's design principal, "by moving the center of social activity to the new building." With future growth planned to the north, the 20,000-square-foot student center designed by Architekton should serve as a hub for years to come. The particular tenants in the building, though, will probably change over time, as some find more space in future buildings. So the student center had to be remarkably flexible in terms of internal spaces, accommodating athletic-department and counseling offices for a few years and then perhaps different departments later.



1. *Student center*
2. *Classroom building*
3. *Performing arts center*
4. *Library*
5. *Administration*

Solution

With a tight budget ($2.2 million)

The architects had considered using an ectoskeleton for the tilting roof, but simplified it with steel trusses and outriggers (below). Activities spill out of the building, reinforcing the main walkways on the campus from the south (opposite, top left) and the east (opposite, top right). Future growth will take place to the north (site plan, left).

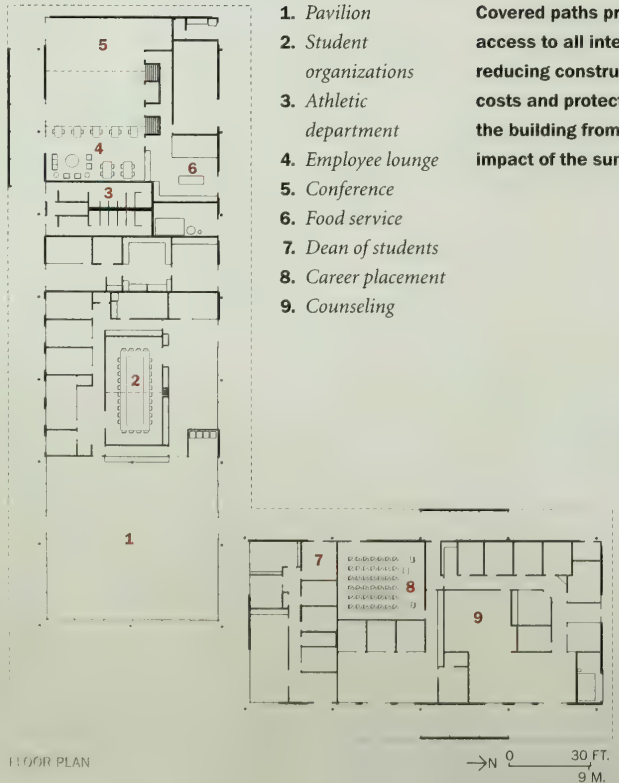
PHOTOGRAPHY: © BILL TIMMERMAN











FLOOR PLAN

1. *Pavilion*
2. *Student organizations*
3. *Athletic department*
4. *Employee lounge*
5. *Conference*
6. *Food service*
7. *Dean of students*
8. *Career placement*
9. *Counseling*

Covered paths provide access to all interiors, reducing construction costs and protecting the building from the impact of the sun.

and a changeable program, the architects realized they needed to develop a very simple scheme accented by one or two attention-getting moves. So they designed an L-shaped, concrete-block structure in which a walkway around the perimeter provides covered but unconditioned access to the offices and spaces inside. By tilting the roof up at the corner of the two wings and extending it out 30 feet, they created a soaring "pavilion" that can serve as a casual café or transform itself into a space for more formal celebrations. Steel outriggers project the pavilion's roof beyond that of the rest of the building, and aluminum louvers provide sun protection around the perimeter, forming a "double veil" for the corner space. Garage doors around the conditioned portion of the pavilion can roll up to make a 60-by-90-foot indoor/outdoor room. "It's like having a giant porch outside your living room," says Kane.

"Other buildings on campus are colorful, but turn inward," states Kane. "We took a different approach with our building, giving it a neutral palette of materials but opening it up to the campus walkways." At night, the student center changes personality as gels on the pendant fluorescent lights attached to the roof's outriggers bathe it in color.

With the pavilion and its porch playing starring roles, the spaces inside the student center perform in a supportive capacity. Concrete block, painted gypsum board, and movable partitions define the various rooms and give them a straightforward, utilitarian character.

Commentary

Constrained by its modest size and cost, the student center smartly draws attention to its one big feature and makes this work as both an indoor and outdoor room. And by spilling its activities outdoors, it reinforces the campus's public realm. ■



The forecast calls for Tyvek®.

Nothing threatens the structural integrity of a building like unwanted water and moisture. That's why intelligent moisture management is so critical to sound design and construction. And why more architects now protect their projects with DuPont™ Tyvek® CommercialWrap®.

Tyvek® CommercialWrap® was engineered specifically to help protect exterior wall systems in today's higher-value light commercial construction. It's up to 300% better at bulk water holdout than conventional building papers. And because Tyvek® breathes, it helps allow moisture vapor molecules to escape the wall cavity. So walls stay dryer.

You can't do anything about the weather. But you can prepare for it, with Tyvek®. Find out more at 1-800-44-TYVEK® or www.TYVEK.com.

Tougher, stronger, higher-performance

DuPont™ Tyvek® COMMERCIALWRAP®

DUPONT
The miracles of science™

© Copyright 2003-2005 E.I. du Pont de Nemours and Company. Tyvek® is a registered trademark of DuPont for its brand of protective material. All rights reserved

CIRCLE 50 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



New Pilkington **OptiView**™ Anti-Reflective Glass

With two advanced-technology pyrolytic surfaces and a laminated core, Pilkington **OptiView**™ Anti-Reflective Glass reduces reflections – both from the outside *and* inside – to less than 2%, blocks over 99% UV transmittance, and still allows more visible light to pass through than even clear float glass!

The result is a unique fabricated glass that combines the strength, security, safety and sound reduction of laminated glass with the low-reflectivity of a high-end specialty product.

And when you combine that with its large size capability and the fact that it can be tempered and bent like ordinary glass, Pilkington **OptiView**™ Glass is not only ideal for museums and displays, but a practical choice for retail storefronts, showrooms, and a host of applications where an anti-reflective product was never possible before.

It's just one more example of Pilkington's advanced technology glass products. To find out more, call us at 800 221 0444, or visit www.pilkington.com.

Pilkington **OptiView**™ Anti-Reflective Glass.

It's the most amazing glass you'll never see.

PILKINGTON

First in Glass™

Pilkington Building Products North America 811 Madison Ave., P.O. Box 799 • Toledo, OH 43697-0799 • Domestic Sales: 800 221 0444 • International Sales: 419 246 4943
Main Office: 419 247 3731 • Fax: 419 247 4517 • E-mail: building.products@us.pilkington.com • Website: www.pilkington.com

Actual photos comparing reflectivity of clear float glass and Pilkington **OptiView**™ Anti-Reflective Glass. Due to printing and reproduction limitations, photo may not represent actual glass colors.
"OptiView" Glass and First in Glass™ are trademarks of Pilkington.

CIRCLE 51 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

A New Era for Fire Protection and Life Safety

WHILE NIST AWAITS PUBLIC COMMENTS ABOUT ITS INVESTIGATION INTO THE CAUSES OF THE COLLAPSE OF THE WORLD TRADE CENTER TOWERS, TALL BUILDINGS CONTINUE TO RISE



In February, the 32-story Windsor tower in the business district of Madrid, Spain, burned out of control for 16 hours. Still, the structure did not collapse.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 146 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Discuss increasing construction and design requirements for high-rise buildings.*
2. *Explain the concept of three rings of defense for high-rise buildings.*
3. *Describe methods of redundancy and diversity for defense of buildings.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to **www.architecturalrecord.com**.

By Sara Hart

On June 23, the National Institute of Standards and Technology (NIST) released a 10,000-page report on the collapse of the World Trade Center (WTC) on September 11, 2001, now starkly referred to in shorthand as 9/11. The report (available at wtc.nist.gov) was conducted over three years under the authority of the National Construction Safety Team (NCST) Act, which had been signed into law on October 1, 2002.

According to the report's executive summary, the goals of the investigation were to examine the building construction, materials, and the technical conditions that contributed to the chain of events resulting from the collision of two commercial airliners into the WTC Twin Towers. The investigation yielded a plethora of recommendations for improvements in the way buildings are designed, constructed, maintained, and inhabited, as well as suggestions for revisions to current codes, standards, and practices. Thirty recommendations are divided into the following eight groups: increased structural integrity, enhanced fire resistance of structures, new methods for fire-resistance design of structures, active fire protection, improved building evacuation, improved emergency response, improved procedures and practices, and education and training.

While these recommendations will greatly influence the course of building-code revisions for decades to come, NIST is a nonregulatory agency of the U.S. Department of Commerce with no statutory authority to assign fault or negligence or mandate code revisions. Its main mission is fact-finding, in order to improve the safety and structural integrity of all buildings. "NIST's recommendations do not contain specific language regarding proposed code or law changes, but rather areas where code, product, or policy development changes should be made or considered," explains James Quiter, ArupFire principal. Quiter chairs the High Rise Building Safety Advisory Committee, formed by the National Fire Protection Agency (NFPA) to review the report with NIST officials and formulate responses. In addition, various structural-engineering organizations, the American Institute of Architects, the Society of Fire Protection Engineers, and others have formed committees to look at and respond to the report. Several of the major engineering firms, including Arup, have also formed in-house review groups to coordinate official responses to the report.

The overall impact of the report remains to be seen. There are some recommendations, which, if taken to their fullest extent, could have substantial ramifications for tall-building design. Several recommendations have already been implemented independently. There are still others that will need to wait for further development of new products, but as Skidmore, Owings and Merrill's (SOM) technical architecture partner, Carl Galioto, FAIA, predicts, the issuance of the report may spur that development.





Life-safety features at Seven World Trade Center have been made robust by redundancies and diversity of systems. Fireproofing on the structural steel and the automatic sprinkler system on each floor exceeds existing codes in strength and capacity, respectively. Double-capacity water tanks and dual fire standpipes serving alternate floors create secondary protection by automatic sprinklers if any standpipes are compromised.

In the meantime, tall buildings continue to rise. There are 96 high-rise buildings under construction in New York City, according to Emporis, an information provider with a focus on high-rise buildings (12 floors and more). Until the codes change to reflect the NIST recommendations, decisions about how far a project should go beyond complying with existing codes is left to the architects, engineers, and owners who design and pay for them. Safety issues notwithstanding, their choices continue to be influenced by economics, building use, location, and in the case of post-9/11 New York, the public profile of the building.

A phoenix rises

Seven World Trade Center (7WTC) was the last building to collapse on September 11, 2001, after burning for seven hours. Today, it's the first to be rebuilt at Ground Zero. The 52-story building, designed by the New York office of SOM for Silverstein Properties, will enclose 1.7 million square feet of commercial office space.

SOM, structural engineers WSP Cantor-Seinuk, and m/e/p and fire-protection engineers Jaros, Baum & Bolles examined a host of options as they developed a plan for 7WTC. SOM's Galioto describes the team's strategy for designing a structure at Ground Zero, a site with arguably the world's most infamous parcel of real estate, as comprising three concentric rings of defense—suppression, protection, and evacuation. Within each ring, the design team fortified life-safety features by inserting what Galioto refers to as *redundancy* and *diversity*, in an effort to ensure, as much as is technologically possible, continuous performance of all systems in every likely circumstance.

"The first ring of defense calls for suppressing the fire where it starts, creating greater opportunity for evacuation and less property damage," Galioto explains. In the wake of 9/11, fire experts have raised concerns about the reliability, or rather the vulnerability, of sprinkler systems. SOM has rigorously applied the principles of redundancy and diversity to mitigate these concerns. "With regard to redundancy, we followed several courses simultaneously. We increased the density of sprinkler heads, constituting an upgrade from 'light hazard' to 'ordinary hazard.'" (The 2002 *NFPA 13* handbook of "Codes and Standards" classifies types of hazards requiring sprinklers as light, ordinary, or high.)

The second redundancy addresses the reliability of water supply to the sprinklers. Most building codes require only one riser to feed all the sprinklers. SOM doubled the supply by inserting a separate standpipe in both stairwells. Each supply alternates floors: One provides water to the





The steel members are sprayed with a robust, medium-density, portland-cement-based fireproofing that has a bond strength of 2,000 psf and a minimum density of 22 pcf, resulting in a compressive strength many times greater than that which is required by New York City building codes.



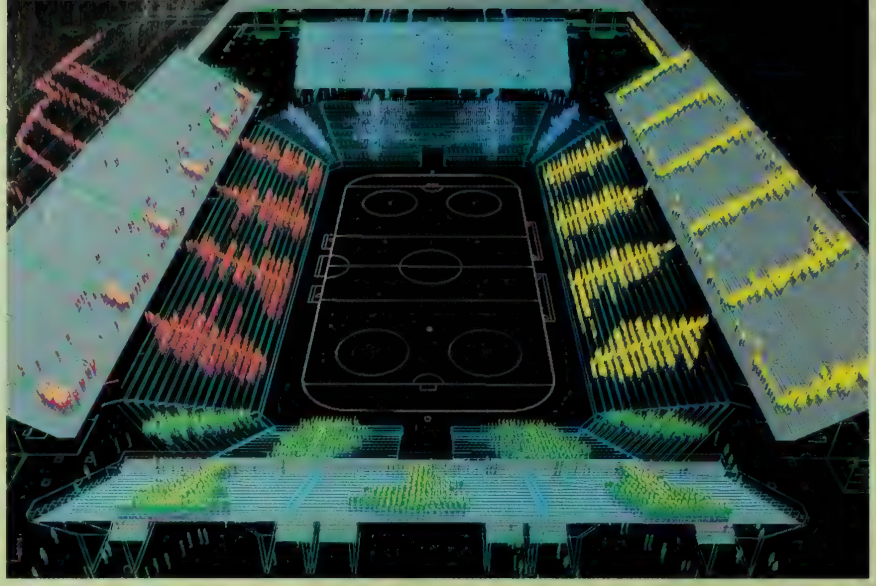
even-numbered floors, the other to the odd-numbered ones. "This ensures that if one fails, no two consecutive floors will be without water," he continues, thus increasing the ability to suppress the vertical spread of the fire. "There has never been a fire in a high-rise commercial building in the U.S. that has spread in this manner if the sprinklers were functioning properly." He cites the fierce 1991 Meridian Plaza fire in Philadelphia as an example. "The building was in the process of having a sprinkler system installed. The fire spread vertically through the floors where sprinklers had not been installed. When it reached the levels where new sprinklers were operative, the fire was suppressed."

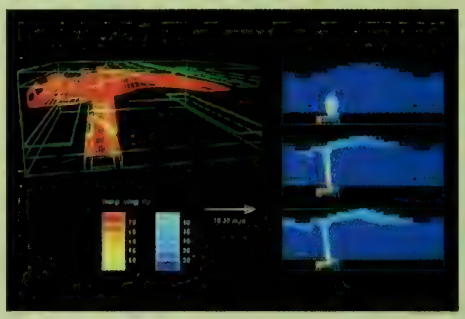
THREE CONCENTRIC RINGS OF DEFENSE REPRESENT THE ESTABLISHED TRINITY OF FIRE PROTECTION—SUPPRESSION, PROTECTION, AND EVACUATION.

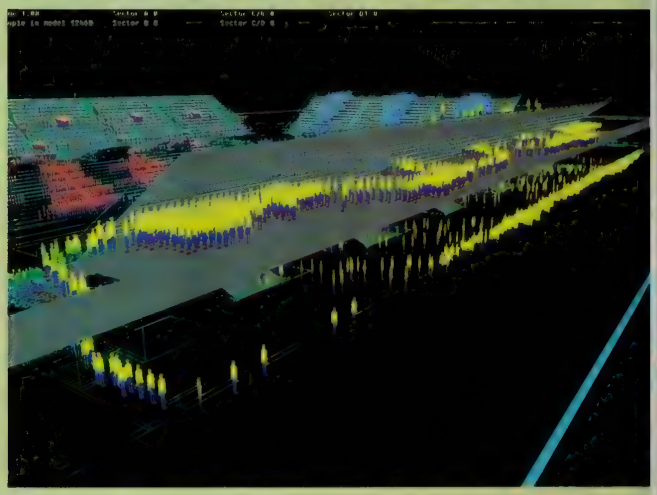
At 7WTC, the two risers are interconnected at the top and bottom of the building, creating a loop. "If there were two completely independent risers, then a break in one riser would cut off water to every floor," explains Galioto. "With a system of valve isolation, the loss of sprinkler protection could be limited to a section of the riser, and the water could still be supplied from above and below the break." If the water supply is ruptured at a point along the loop, breach-control values automatically engage to prevent the system from draining out. Diversity is achieved by specifying, rather than a single tank, multiple tanks in various locations throughout the building. In addition, whereas the code requires a 30-minute supply of water, the 7WTC system doubles the output to an hour.

The second ring of defense addresses protection of the structure. 7WTC is a steel structure with a concrete core. Spray-applied fire-resistant materials (SFRM) are the standard method of passive fire protection for steel. It goes without saying that fireproofing is only effective if it stays adhered to the structure. Unfortunately, building-performance analysis of the World Trade Center towers on 9/11 showed that the impact of the aircrafts dislodged the fireproofing materials on the steel columns, exposing them to extreme heat.

In response, the 7WTC team carefully considered the properties of existing SFRM products. There are two factors determining performance of SFRM—density and bond strength. Density refers to the amount







Egress Modeling
ArupFire uses STEPS (Simulation of Transient Evacuation and Pedestrian Movements), a three-dimensional people-movement-simulation program that models evacuation. STEPS enables the user to model the building three-dimensionally. The graphics allow the user to visually identify occupant flows, queuing, and overall efficiency of the proposed evacuation route. STEPS is often used in conjunction with three-dimensional smoke and fire modeling using Computational Fluid Dynamics (CFD) software.

of mass per unit volume. Bond strength refers to the amount of force required to separate the fireproofing from the steel. SOM sought a material with strength and adhesion superior to that required by the New York City code, and selected a medium-density, portland-cement-based product called Monokote Z-106/HY from Grace Construction Products. Galioto is confident that manufacturer's claims that the product's bond

THE CORES ARE HIGH-STRENGTH, REINFORCED, POURED-IN-PLACE CONCRETE, VARYING FROM 12 TO 28 INCHES THICK.

and compressive strengths are five times higher than the building-code requirements for steel structures are correct.

The design team did not rely solely on superior fireproofing for structural protection. The elevator and stair cores are high-strength, reinforced, poured-in-place-concrete enclosures, varying in thickness from 12 to 28 inches depending on floor level. The issues regarding the cores lead directly to the third ring of defense—evacuation, which takes place, of course, inside the cores. The first improvement was simple enough—increase the space by making the stairwells 20 percent wider than the code requires. The goal was to increase the flow of occupants out of the building without impeding the counterflow of emergency responders rushing in.

While it's a given that stairwells, regardless of width, must remain clear of smoke, there are different schools of thought on the best way to achieve this. Galioto says that New York City codes show a preference for purging smoke that migrates into the stairwells via a ventilation system. SOM went a step further and adopted the International Building Code, which, unlike New York City's current regulations, requires both ventilation and pressurization. At 7WTC, in addition to an exhaust system, air will be forced into the stairwells, creating a positive pressure within the enclosure, thus preventing most smoke from invading the space around door frames. In addition, the fire department will control the system by regulating both pressurization and exhaust, depending on actual conditions.

The team made every effort to guarantee uninterrupted lighting in the stairwells. Local codes require that stairwells in commercial buildings be finished with photo-luminescent paint that will glow in the dark in the event of total power failure. The engineers added a redundancy between the generators and the paint and backed up the generators

The Power of One

Discover a clear vision for fire-rated glass design.

Designing and specifying is no simple matter — so why make it more complicated than necessary?

Vetrotech Saint-Gobain is your single source for the glass and framing required to build your fire-rated glass designs.

Contact us for more information on our broad range of capabilities. Our knowledgeable staff will be happy to help you.

Vetrotech is a division of Saint-Gobain Glass, a business with centuries of glass-making tradition.



VDS Framing
Rated up to 120 minutes. Designed for glazed door, wall and window sections in offices, schools, and hospitals.



Swissflam Structure
All-glass system with a 60 minute rating. Creates a maximum visual area with a minimal profile.



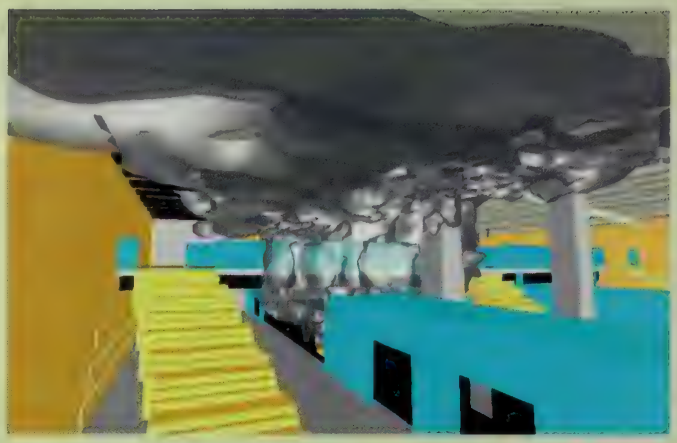
All-Glass Door
The world's first 20-minute fire-rated door. Can be used on its own or as the finishing touch to VDS or Structure Systems.

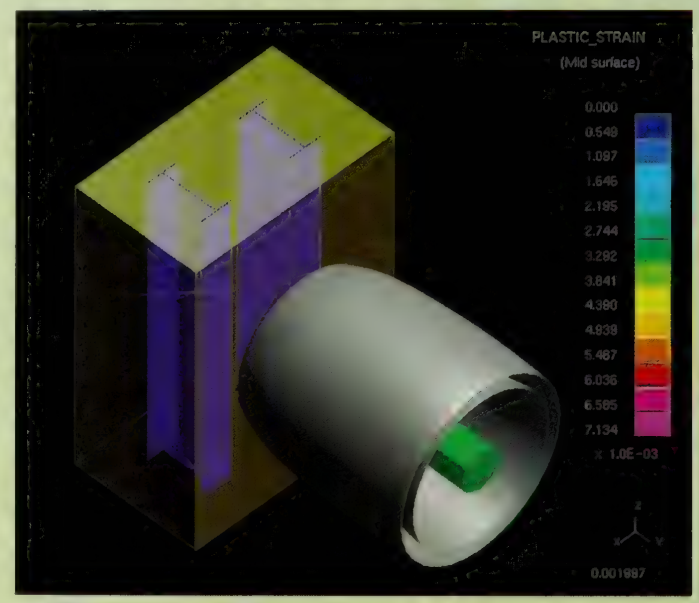
Vetrotech Saint-Gobain
888-803-9533
www.vetrotechusa.com

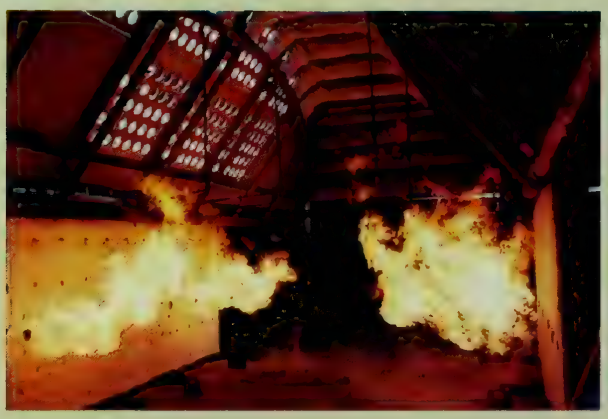
SAINT-GOBAIN
VETROTECH

CIRCLE 52 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Modeling and Testing
Fire Protection Engineers have numerous tools at their disposal to address fire/life safety challenges. Computational fluid dynamics (CFD) models produce a detailed picture of smoke and fire conditions, such as temperature, toxicity, and visibility. A fire test (bottom right) was performed to verify that a design involving structural elements filled with water could provide cooling of the structure, as well as a water supply for the sprinklers.







with a battery-powered source.

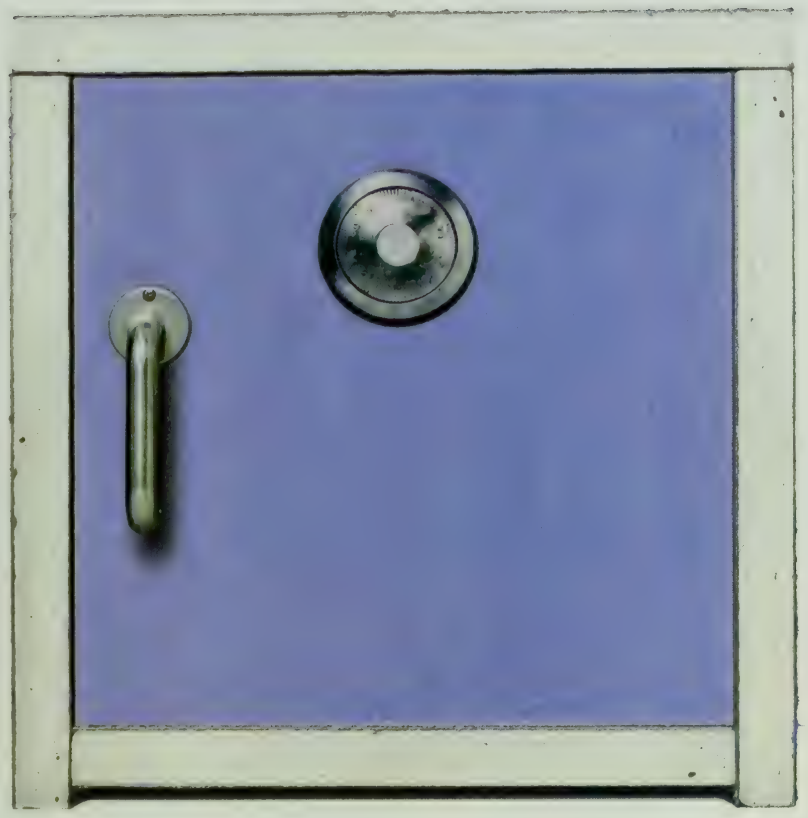
The stairs reach a transfer level toward the base on the building. At this juncture, the two stairwells split into four at the building's perimeters, in order for occupants to exit directly to grade, rather than into the public lobby. At the transfer level, interactive signs direct occupants to specific paths of egress. And as with all the life-safety features, the signs can be manually overridden by the fire department, as the situation dictates.

FEATURES AT 7WTC COULD PROVIDE A PRECEDENT FOR A TREND AWAY FROM EXISTING PRESCRIPTIVE-BASED CODES TO THOSE THAT ARE PERFORMANCE-BASED.

Prescriptive- vs. performance-based

The life-safety features at 7WTC are, to a certain extent, an acknowledgement of the shift away from existing prescriptive-based codes to performance-based ones. ArupFire has done considerable work in this area and is an advocate for performance-based design. Performance-based codes are already in use in a number of countries around the world, and in the U.S., the International Code Council has developed a performance-based building code along with NFPA, which has performance options in its building code, *NFPA 5000*. Various performance-based design guides are also in use or under development: The Society of Fire Protection Engineers, for example, has developed a performance-based fire-engineering guide, and the Applied Technology Council is developing performance-based seismic-design guidance.

Brian Meacham, who leads the risk consulting business for Arup in North America, understands the primary difference between prescriptive-based and performance-based approaches: "Prescription focuses on what you need to do, and performance focuses on what outcomes you want to achieve. Prescriptive-based codes prescribe what must be designed, and in many cases how to design it, without providing any indication of the objective of the provision. For example, prescriptive egress provisions include maximum travel distances, separation distances between exits, and width of exit stairs. The design aspect is, therefore, fairly straightforward and often limited in options," he explains. Meacham believes that after 9/11, it makes more sense to incorporate performance-



Hi-Impact® BRAND XP® Wallboard.

The right combination for extra protection.

When you need a rugged wallboard for high-traffic areas, you want Hi-Impact XP. It's the only wallboard that resists abuse, impact, mold and moisture. No other wallboard combines all this protection, and installs like standard wallboard. For schools, dorms, healthcare facilities and other critical areas, play it safe and specify Hi-Impact XP.

National Gypsum®

TECHNICAL INFO: 1-800-NATIONAL

Excellence Across The Board®

nationalgypsum.com

CIRCLE 53 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The 1991 fire at One Meridian Plaza in Philadelphia burned for 18 hours and was only suppressed when it reached a floor that was protected by automatic sprinklers.

based approaches in both building codes and building design. A performance-based approach helps answer questions about how much fire resistance is needed, what fire-protection systems are appropriate, and what features an egress system should have. "Performance-based codes regarding egress, for example, would require the egress system to be designed with adequate capacity and protection to provide occupants with sufficient time to reach a place of safety without being exposed to untenable conditions," he says. "By stating the desired outcome, a performance-based code requires the fire-protection engineer to assess the fire hazard, as well as the time required for egress, and to design an integrated egress solution that achieves the stated performance."

ArupFire strategist Chris Marrion, whose special interest involves extreme events, advocates performance-based codes and adds, "Codes typically do not address extreme events such as blast, impact, and chemical/biological hazards. A threat and risk assessment for an individual building can help identify what blast, impact, and chemical or biological hazards it may be susceptible to." These arguments for performance-based codes are applicable to all risks, but they will be useful beyond life safety in areas such as energy efficiency and conservation, curtain-wall design, and material selection. In the near future, unfortunately, the focus will remain fixed on avoiding and confronting danger. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "A New Era for Fire Protection and Life Safety" using the learning objectives provided.
- Complete the questions below, then fill in your answers (page 216).
- Fill out and submit the AIA/CES education reporting form (page 216) or download the form at www.architecturalrecord.com to receive one AIA learning unit.

QUESTIONS

1. Recommendations for improvement in the way buildings are designed, constructed, maintained, and inhabited were made by which group?
- **a.** NIST
- **b.** a regulatory agency of the Department of Commerce
- **c.** a Department of Commerce authority
- **d.** all of the above

2. Which of these is not included in the concept of concentric rings of defense?
- **a.** fire suppression
- **b.** armament of occupants
- **c.** evacuation of occupants
- **d.** protection of the structure

3. In this defense concept, there is a greater opportunity for evacuation and less property damage if which is in place?
- **a.** good egress routes
- **b.** good alarm systems
- **c.** good fire-suppression systems
- **d.** good emergency lighting

4. Which is not a part of the redundancy and diversity plan for sprinklers at 7WTC?
- **a.** two completely independent risers
- **b.** two looped risers
- **c.** increased density of sprinkler heads
- **d.** water supply increased from 30 minutes to an hour

5. How will smoke be purged from stairwells at 7WTC?
- **a.** by ventilation
- **b.** by ventilation and pressurization
- **c.** by exhaust
- **d.** by controlled pressurization

6. The stairwells at 7WTC are illuminated by which method?
- **a.** generator
- **b.** battery
- **c.** photo-luminescent paint
- **d.** all of the above

7. The stairwells at 7WTC exit to what area?
- **a.** lobby
- **b.** transfer level
- **c.** parking garage
- **d.** grade level at exterior

8. According to this article, the life-safety features at 7WTC might provide a precedent for adopting which type of building codes?
- **a.** prescriptive-based
- **b.** performance-based
- **c.** New York City codes
- **d.** International Building Codes

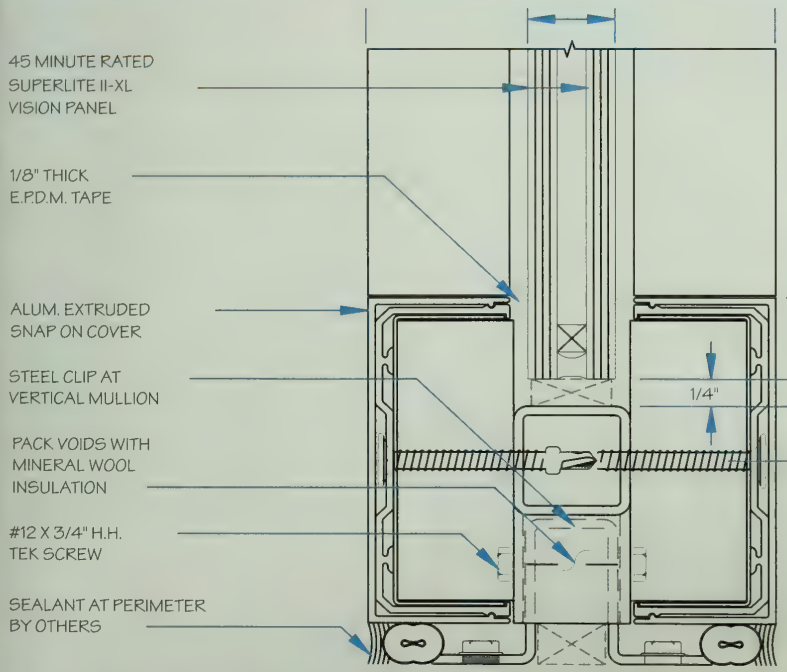
9. A code that states the desired outcome is which type?
- **a.** prescriptive-based
- **b.** performance-based
- **c.** variance-based
- **d.** descriptive-based

10. At 7WTC, the New York fire department can override all except which fire-protection device?
- **a.** interactive exit signs
- **b.** stairwell exhaust
- **c.** sprinkler valves
- **d.** fireproofing on the steel columns

SuperLite™ Solution.



Your First Source for Fire Rated Glazing



- FIRST with fully code approved fire-rated products from 20 to 120-minutes.
- FIRST with an exterior fire-rated curtain wall system.
- FIRST with an engineered aluminum snap-together curtain wall.
- FIRST to offer a monolithic glazing that substantially reduces the dangers of radiant heat.
- FIRST to provide a safe wired glass that protects K-12 children from injuries due to accidental impact.

SAFTIFIRST™
FIRE RATED GLAZING SOLUTIONS Since 1982
www.safti.com 888.653.3333

SUPERLITE II-XL IN GPX GLASSPROTEX™

Sunset Elementary, San Ysidro, CA
Coup Smith Diaz Architects

CIRCLE 54 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CONCRETE THINKER DOUG FARR

"SUSTAINABLE DESIGN IS A NECESSITY. ARCHITECTS MAKE IT A REALITY."

BUILDING FOR COMMUNITIES
Doug Farr thrives on the challenge of designing buildings and communities that integrate materials effectively to maximize human and natural benefits, creating healthy and vibrant places to live and work.

CONCRETE IS A SIGNIFICANT PART OF THE PLAN
Sanctuary Place, a permanent supportive residence for once-homeless women and their children, relies on concrete and concrete masonry to create an effective thermal envelope, reduce sound transmission between apartments, and provide a durable, safe, and healthy living place. The concrete incorporates recycled materials, enhances daylighting, and provides low-maintenance finishes.



Join Doug and other Concrete Thinkers who are creating their legacies with sustainably developed buildings by relying on the durability, versatility, and energy efficiency of concrete. For more information, visit **WWW.CONCRETETHINKER.COM**

Concrete Thinking for a sustainable world

PCA Portland Cement Association

CIRCLE 55 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Tech Briefs

Seismic framing technology and smart siting aid a California community college

Several years ago, during a seismic study of the San Bernardino Valley College (SBVC) in California, engineers discovered that a portion of the San Jacinto fault, a branch of the San Andreas fault system, lay right underneath the school's campus—endangering the integrity of nearby buildings and threatening the safety of students and faculty. With the help of design architect Steven Ehrlich Associates, along with engineers at Arup and associate architect Thomas Blurock Architects, SBVC recently opened three new buildings that employ unbonded brace frames, or buckling-resistant frames, as they've come to be known, a Japanese technology that's been making inroads in U.S. seismic design for the past five to six years. The new buildings are part of a larger master plan and rebuilding effort that reflects and even celebrates the existence of the fault under SBVC's 60-acre campus.



Lighting animates the health sciences building and emphasizes its angles.

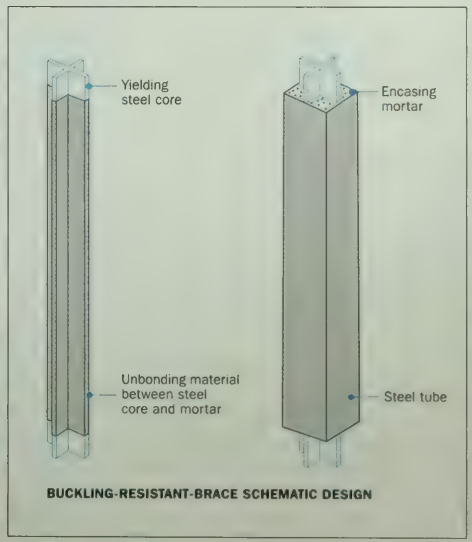
More strength, less material

The three new structures—a health and life sciences center, a library and learning center, and an administrative and student services building—opened earlier this year. (An arts center and campus center, also designed by Ehrlich and his collaborators, are slated for completion in 2006.) They share a common material language of structural steel, glass and metal panels, and stucco cladding; their angular, dynamic volumes, folded roof plates, and triangular forms are meant to suggest the plate tectonics of the shifting ground planes they sit on. "This was a unique opportunity for the architects and the college to change an entire campus with a consistent voice," Ehrlich says. He and his collaborators worked closely with the SBVC community to solicit input on what the new structures should look like.

All the buildings are framed in structural steel, made in the U.S., and augmented with the buckling-resistant braces, which were made in Japan. Unlike typical structural steel braces, buckling-resistant braces perform as well in compression as they do in tension. The brace consists of a steel core, typically in a cruciform shape, slipped inside a steel sleeve or tube filled with lightweight mortar. A special coating is applied to the core steel so that it doesn't adhere to the mortar, meaning the core can slide back and forth, much like a piston, inside the tube. When tension forces are applied, the brace can elongate like a traditional brace as the core slides within the tube. When hit with compression forces, the combination of the mortar and steel core provides enough stiffness and strength to prevent the brace from buckling, which can reduce the stiffness and strength of the entire building, leading to catastrophic collapses.

The buckling-resistant braces have other advantages, as well. They allow the structural frame to be built using less steel overall, but more important, their increased compressive strength simplifies the design of member connections and lowers the foundation's strength requirements, says Atila Zekioglu, a





BUCKLING-RESISTANT-BRACE SCHEMATIC DESIGN

Buckling-resistant-brace frames (illustration, left) are visible in the lecture hall of the library (photo, far left). Because the steel core can slide within the mortar-filled tube, the braces can elongate when subjected to tension. They also have the strength to withstand repeated compression forces without buckling.



3form
MATERIAL SOLUTIONS
samples: 3-form.com / 800.726.0126

CIRCLE 56 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Maximum VALUE through Superior SERVICE



AVOID BACK INJURIES

EVERY DOCK NEEDS A LIFT

An Advance dock lift is the only equipment that can service all trucks. Full line of dock lifts including:

- Portable
- Top Of Ground
- Pit Mounted



INCREASE PRODUCTIVITY



DOCK LIFTS

Call 1-800-THE-DOCK or visit our web site www.advancelifts.com for a FREE CATALOG.

ADVANCE LIFTS

CIRCLE 57 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



The triangular roof form of the life sciences building shelters an informal gathering space.

principal at Arup's Los Angeles office and the structural engineer on the SBVC project. Although the design team also considered using concrete shear walls for lateral stability, the weight and thickness necessitated by the fault's location made them infeasible both aesthetically and technically.

The buildings are strong enough to withstand earthquake forces twice the force of gravity in the lateral direction. To put that in perspective, the buildings would be structurally sound if they were turned on their sides and acted structurally as cantilevers, Zekioglu says.

Planning for future growth

Arup's Los Angeles office has been consulting with SBVC on seismic and geotechnical issues for more than 10 years, and the architects tapped the firm's expertise not only for engineering the new buildings, but also for finessing tricky siting and planning issues.

As per state code, SBVC had to establish a no-build zone within 50 feet of the fault trace on each side; as a result, seven existing structures were razed. At a design charrette early in the project, Zekioglu explained to the design team that the strongest forces during an earthquake run either parallel or perpendicular to the San Jacinto fault line. He recommended that the master plan require new buildings to be aligned in these directions (rather than the existing campus grid) to reduce torsional forces on the buildings in the event of an earthquake. This decision also uses open land efficiently around the swath of the no-build zone, which is at least 150 feet wide in some areas of campus.

A changing field

The rebuilding effort at SBVC may serve as a template for the design of future buildings in seismically vulnerable regions. The three new structures are the first approved by California's Division of the State Architect (DSA) that use buckling-resistant braces, and perhaps more critically, the first to employ performance-based seismic design rather than relying on prescriptive building codes. The codes can be troublesome because they don't always accurately reflect what's going on at a particular site. "At SBVC's campus, the general seismic hazard code underestimates the severity of possible seismic activity at the campus by 100 percent," Zekioglu says. Arup's design experience with the new braces, which began several years ago when they used them in projects at U.C. Davis and U.C. Berkeley [RECORD, October 2002, page 185], helped convince state officials that they're a proven method. "Advocating any unique system requires intense investigation and collaboration," he says, "but DSA is breaking new ground here. We'd be happy to see other projects follow suit." *Deborah Snoonian, P.E.*



WE'VE CREATED AN INGENIOUS WAY TO JOIN PANELS AND PARTITIONS. NOT TO MENTION ARCHITECTS AND BUILDERS.



45-degree corner caps were used to connect Hy-Lite panels to form this neo-angle shower. Flat caps were used to finish off the top and sides of the doorway, while a flat cap and mounting channel were used to attach the panels to the curb and wall.

Aluminum accessories from Hy-Lite® make it easy for everybody to see eye to eye. That's because they make joining our prefabricated, ready-to-install panels, partitions and radius walls remarkably fast and easy. Panels and partitions can be joined at 45- and 90-degree angles, allowing builders and architects to specify Hy-Lite acrylic block systems in almost any conceivable configuration. Accessories are also available to connect angled walls, to seamlessly join panels, and to beautifully finish the ends of a panel or partitions. With aluminum accessories from Hy-Lite, discovering your imagination is easier than ever. To locate a supplier, call 1-877-712-4013 or visit us at www.hy-lite.com.

Hy-Lite® PRODUCTS, INC.
Discover your imagination.



Round caps finished off the ends of this radius wall perfectly. Aluminum mulls were used to connect the three radius walls together, while a flat cap mounted the units to the top of the curved wall.



90-degree corner caps were used to connect four acrylic block panels together to form decorative, lit towers. The panels were mounted to the base and top piece with flat caps.



Aluminum mulls were used to connect these flat panels and radius walls together. A flat cap and mounting channel were used to mount the units to the base and the walls. Flat caps were also used to connect the desktop to the top of the panels.

CIRCLE 58 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

You provide the "oooh."

We'll provide the "ahhh."



BALTIMORE/WASHINGTON INTERNATIONAL AIRPORT - MAIN TERM



Winner of the 2005 AIA/CES Award for Excellence

Nothing's more rewarding than seeing your vision take flight. And no one's more committed to the succe completion of your tile and stone installations than our Architectural Services team. We simplify the specific process with everything from easy-to-use installation system CAD details and product data to persona consultation with our team of certified professionals. In fact, we've just been honored by the AIA/CES as a pre provider of continuing education programs. Our expertise, combined with our full line of installation systems outstanding warranties, give you the resources you need to make sure your loftiest plans become a reality.

AIA/CES REGISTERED PROVIDER

CUSTOM BUILDING PRODUCTS®

Architectural Resource

INSTALLATION SOLUTIONS FOR TILE AND

800-272-

www.custombuildingproducts

CIRCLE 59 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



ILLUMINATING DESIGN
ALWAYS ATTRACTS ATTENTION.

When you work with Corian
its **TRANSLUCENCY** lets you create
breathtaking backlit designs.
See all the potential of
DuPont™ Corian® Solid Surfaces
in our Possibilities Magazine.
Call 800-436-6072 or visit
coriandesign.dupont.com
for your copy.

DESIGNER Anki Gneib
TITLE *Reef Lamp*
MEDIUM **CORIAN**™

DUPONT
The miracles of science™

© 2005 DuPont. All rights reserved. The DuPont Oval Logo, DuPont™, The miracles of science™ and Corian® are registered trademarks or trademarks of DuPont or its affiliates.

CIRCLE 60 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



iVaLo
LIGHTING

front view
23" wide

Inflection TW751

Designed by Winka Dubbeldam

A 23" wide sconce designed to be as beautiful from the side as the front

Dimmable compact flourescent ADA compliant sculptural form for use singly or in clusters



side view
4" deep (ADA)

Ivalo Lighting Incorporated
www.ivalolighting.com

2300 Computer Ave, Suite i-2
Willow Grove, PA 19090

telephone 215.659.8841
facsimile 215.659.1006

CIRCLE 61 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Lighting

Escada immigrates to Red Square, Frankfurt spins a nightlife Cocoon, and an oasis rises near Palm Springs

BRIEFS

The luminaries of professional lighting design took their bows in June at the annual Lumen Awards gala in Manhattan. The New York section of the Illuminating Engineering Society presented **top honors to projects as far afield as Finland.** Citations went to Tillett Lighting Design for the Icepool installation at Lapland's seasonal Snow Show [RECORD, May 2004, page 194]; Fisher Marantz Stone for Postcards; the Staten Island September 11 Memorial; Johnson Schwinghammer Lighting Consultants for Truelightpod, a L'Oreal lab in Los Angeles; and Cline Bettridge Bernstein Lighting Design (CBBLD) collaborating with Technical Artistry on the William J. Clinton Library in Little Rock [RECORD, January 2005, page 110]. CBBLD also won honors in the Award of Merit category for the **lighting of the Pier 1 Imports Headquarters** in Fort Worth. Other Merit Award winners were Focus Lighting for Manhattan's flagship FAO Schwarz Store; and SBLD Studio for the illumination of the New York law firm Kirkpatrick and Lockhart. The top **Awards of Excellence were bestowed** on Focus Lighting for two projects: the Semiramis Hotel in Athens, Greece, and the Teatro restaurant at the MGM Grand hotel in Las Vegas. The final Excellence honor went to Cosentini Lighting Design for the Bank of America trading floor in Charlotte, North Carolina. **For photos of the winning projects** and more information on how to enter the 2006 competition, go to www.iesny.org.

1000 Lights (Taschen, 2005) is the title of a new survey of international lighting design, from Edison's first incandescent bulbs to the LEDs of the present. The two-volume study is a companion to the popular ***1000 Chairs*** compendium previously presented by the same publisher. Edited by London-based writers and curators Charlotte and Peter Fiell, the lighting books present more than 1,200 lighting fixtures, from **Tiffany leaded-glass** table lamps to the outrageous designs of the 1960s, then on to the high-tech digital products that now are transforming the marketplace. For more information, check out www.taschen.com. **The International Association of Lighting Designers** hosts its Ninth Annual Educational Conference and Annual Meeting on October 20 through 22 in Washington, D.C. Back on the roster this year is Lighting Cross Talk, a roundtable discussion referred to by some industry wits as "speed dating for lighting designers." The 2-hour session will address topics of interest to both manufacturers and specifiers. Go to www.iald.org to register. *W.W.*

CONTENTS

156 Escada, Moscow
Ansorg
160 Cocoon, Frankfurt
3deluxe
168 Morongo Casino Resort and Spa, California
Visual Terrain
177 Lighting Products

We feel particularly peripatetic this month. Darting across international datelines, we report on how designers around the world are tackling diverse lighting challenges. We venture to Moscow's Red Square, where the retailer Escada has enlivened the GUM department store with high-style apparel and interiors (below). The shop's luminaires, fabricated by Ansorg, juxtapose crystal chandeliers and streamlined metal downlights to brilliant effect.

In Frankfurt, the design firm 3deluxe has threaded the knockout nightspot Cocoon with color, light, and shimmering surfaces.

Then west of Palm Springs, we come upon the miragelike resort called Morongo. Its arsenal of sophisticated fixtures brighten the desert landscape. Finally, we brought back the best of Milan's Euroluce lighting exhibition. Enjoy our travelogue. *William Weathersby, Jr.*





Reflected light off the white-plaster vaulted ceilings complements the rosy-hued accent walls and carpets, an ambient combination flattering to shoppers (above and right). Ansorg created made-to-measure custom pendants for Escada.



The Ansorg design team imbues Moscow's **Escada** shop with sparkling light, bringing flair to Red Square

By William Weathersby, Jr.

Red Square is a monument to Moscow's living history. Here sits the Kremlin, seat of the president and congress; the cathedral of St. Basil and its onion-shaped domes; and Lenin's mausoleum. Here too is the famous GUM department store, which started life in the 19th century as an ornate shopping arcade built to replace a market that had burned to the ground. Designed between 1890 and 1893 by Alexander Pomerantsev, the eclectic building commissioned by Czar Alexander III combines medieval Russian ecclesiastical architectural details laid over an elegant steel framework with a glass roof, which evokes the great turn-of-the-century train stations of London and Paris. Its facade, dominated by a mighty entrance arch and three towers, takes up most of the eastern edge of the square. In 1921, the complex became the official state Soviet department store GUM (Gosudarstvij Univaersalnil Magasin).

In contemporary Russia, GUM has blossomed into the main staging ground for selling luxury goods to the expanding middle and upper classes in the 9-million-strong metropolis. The complex, with approximately 266,000 square feet of retail space, accommodates boutiques for most top fashion designers and world-class brands. The department store's refined interiors feature glass-roofed walkways and domes, vaulted ceilings, ornate detailing in plaster and metalwork, and a central Art Nouveau fountain. GUM is renowned not only for its vast dimensions, but its fully glazed roofs covering the main arcades. These canopies allow natural light to reach down through the two upper levels to the ground floor. (Indeed, originally even the basement spaces received daylight via glass prisms formerly set into the ground-floor plane.)

GUM GRANTS THE RETAIL LANDSCAPE A RICH SENSE OF RED SQUARE HISTORY. LIGHTING HELPS TO LINK OLD AND NEW.

After negotiating a prominent location within the GUM complex, the 26-year-old German fashion house Escada opened its doors to the Moscow public with a tradition-meets-trendy interior landscape enhanced with elegant lighting orchestrated by the German turnkey-lighting-design and fixture-fabrication firm Ansorg. Already boasting 440 freestanding shops and department store boutiques in more than 60 countries, the luxury brand now presents its women's collection, shoes, bags, and accessories on the second floor of GUM, adjacent to one of the ornate steel bridges. Escada, named after an Irish thoroughbred by founders Magaretha and Wolfgang Ley, has brought racy flair to this fashion hotspot on Red Square.

At each of its store locations, the fashion brand's interior design concept follows a consistent theme, "the color of elegance." Working with 1,722 square feet at GUM to create a stand-alone boutique within the larger department store, Escada's team of in-house architects and store planners adapted the theme to this historic container. Restored, vaulted



Escada kept light spilling through its facade to a minimum, since GUM's historic glass ceilings cast daylight throughout the shopping arcades.





Recessed metal-halide lamps illuminate display areas for apparel and accessories (left). The juxtaposition of cascading crystal chandeliers and the high-tech pendants honors GUM's changing history (below).

plaster ceilings arc above shelving and apparel racks constructed of polished steel. African black walnut clads niches and display tables. Velvet fabrics and a limestone floor contrast with carpets in bright pink and fuchsia. The palette of pink, brighter pink, and fuchsia extends to the furniture upholstery and accent walls, allowing a harmonious interplay between the warm tones of the decor and the fashion collections. The new interior fixtures, the apparel and accessories displays, and the architecturally listed building envelope all are showcased by the lighting. Low-voltage sources predominate to provide an ambient lighting scheme rich in contrasting shadow and illumination. Keeping to the corporate image guidelines laid out by Escada's design team, fittings from Ansorg's Cardo range feature a highly polished, custom-chrome finish. Made-to-measure "bespoke" versions of the luminaires feature suspended fittings that comply with the requirements of the city's landmark guidelines while providing brightness reflected by the high ceilings. Daylight from the arcade in front of the store also attractively grazes the entryway.

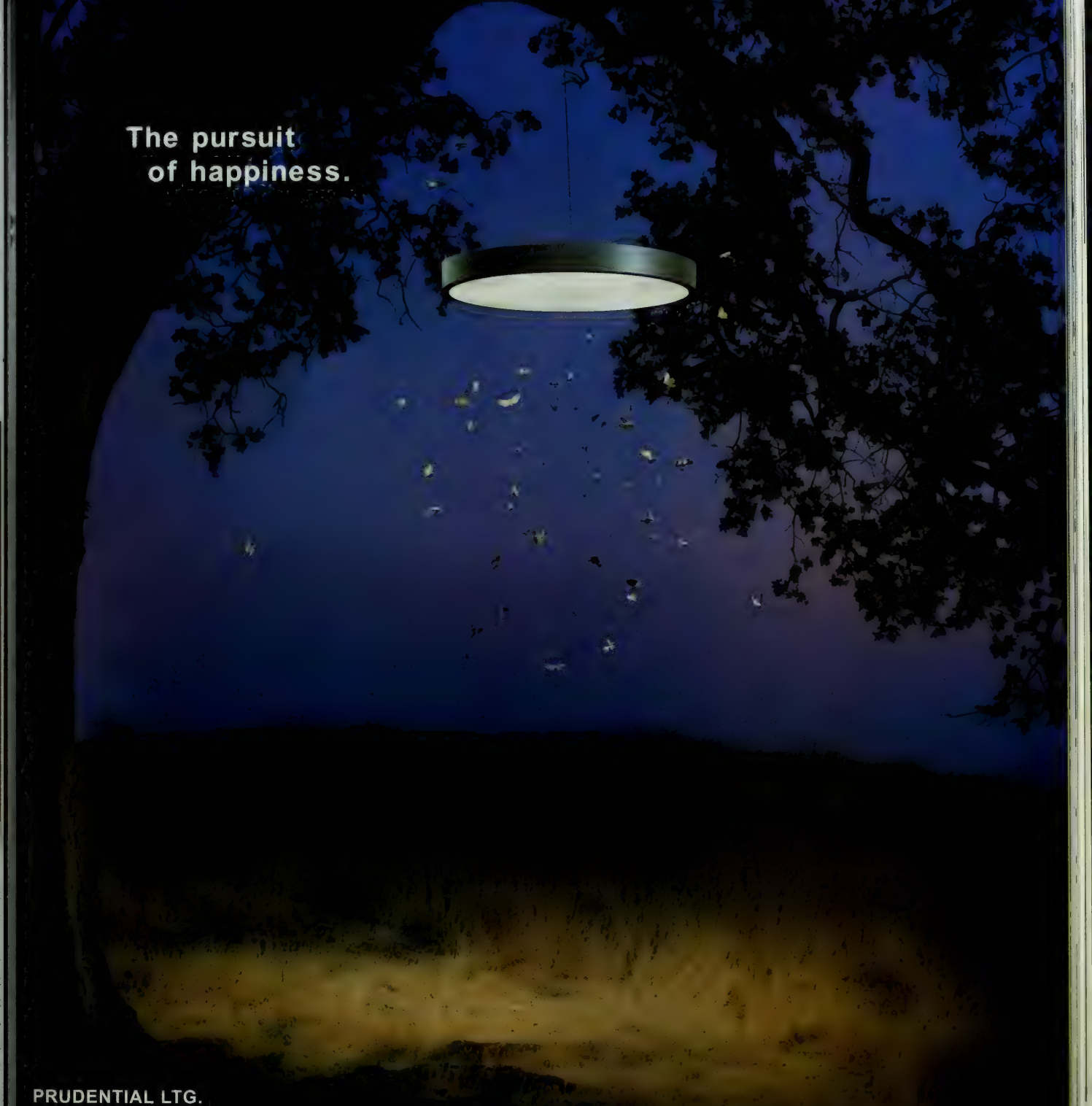
Each custom luminaire houses 90-watt, low-voltage QT12 lamps set within a 9-degree reflector. Window displays and shelving and racks along the perimeter of the Escada boutique can be precisely lit by tightly focused downlights, either wall-mounted or recessed flush with the ceiling plane. The recessed spots are fitted with 70-watt metal-halide CDM-T lamps within a 14-degree reflector.

Meanwhile, custom crystal chandeliers provide cascading, jewel-like contrasts to the modern, super-engineered pendants surrounding them. The juxtaposition of old and new honors the site's ever-changing history, from capitalism to communism and back. The lighting design's industrial polish makes an extraordinary match with the architectural dignity of GUM, sort of like a favorite Escada suit that still fits like a glove and will remain in vogue many fashion seasons hence. ■

Project: *Escada at GUM department store, Moscow*
Developer, interior designer: *Escada AG in-house team; Interior Concept; Blocher & Blocher*
Lighting designer: *Ansorg—Jeremy Delport-Barrett, export manager/coordinator*

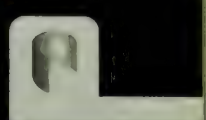
Sources
Custom lighting fixtures: *Ansorg*

For more information on this project, go to Lighting at **www.architecturalrecord.com**.



PRUDENTIAL LTG.

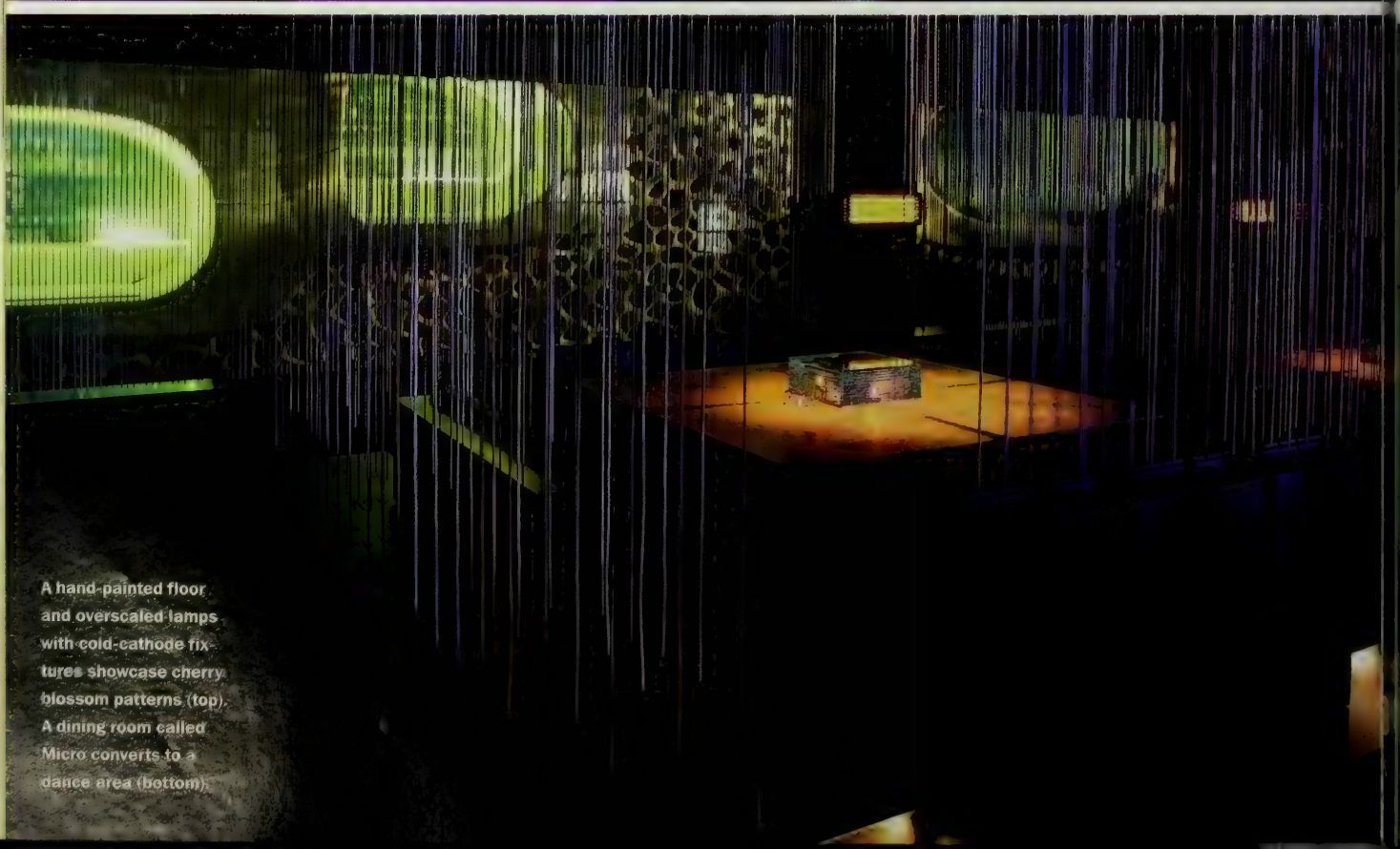
Rounds. Hanging rounds. Recessed rounds. Two foot rounds. Six foot rounds. In a world of straight lines, round is warm, clean, simple, organic. Right. And at Prudential Ltg., from our popular line of Sky Oculus rounds to our incredibly flexible M5 linears, that is our ultimate goal. To help you create, in a clean, simple and organic way, an environment that is as unique as it is inspiring.
Light creates life. Create with Prudential Ltg.



www.prulite.com/Happiness

CIRCLE 62 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/





A hand-painted floor and overscaled lamps with cold-cathode fixtures showcase cherry blossom patterns (top). A dining room called Micro converts to a dance area (bottom).

Interlocking spaces threaded with light animate Frankfurt's **Cocoon Club**, designed by 3deluxe

By John Peter Radulski

Frankfurt, Germany's East End is undergoing a radical metamorphosis. Formerly home to industrial and manufacturing plants, the district has grown into a sought-after center for artists and designers who in turn support an expanding roster of restaurants, bars, and clubs. Among the new boîtes is the aptly named Cocoon Club, where transformation is the norm. Created by the Weisbaden-based interdisciplinary design firm 3deluxe, the 29,000-square-foot club combines dancing, dining, drinking, and networking within a light-filled interior that practically vibrates with multimedia and graphic elements.

The complex sits on the street level of the five-story U.F.O. office building designed by local Deitz Joppien Architeckten. (No, it's not an alien abduction center: U.F.O. is an acronym for "*Unbekannter Frankfurter Osten*," or "Unknown Eastern Part of Frankfurt.") The triangular footprint of the complex, with its three points gently rounded, guided 3deluxe's interior architecture. The central dance zone is ringed by a series of circulation areas and lounges that feed into two restaurants and the restrooms, which are arranged along the building perimeter. Although specific areas have been allocated for discrete uses, the nightclub interiors rely on visual transparency and functional flexibility to create an immersive, sensory environment.

Thirteen seating pods set into a concrete wall separate the perimeter of the dance floor from the dining and lounge spaces (below).

A 325-foot-long "membrane wall," fabricated of concrete panels that serve as projection screens, delineates the three sides of the 8,500-square-foot main Cocoon space. The club is equipped with 23 digital light projectors and an equal number of software systems that also control a LED matrix with a total of 1,152 individual light points. Additional illumination sources encompass automated

John Peter Radulski, the former editor in chief of Hospitality Design, *is a freelance writer based in Westport, Conn.*

Project: *Cocoon Club, Frankfurt*
Lighting and interior designer: *3deluxe—Dieter Brell, Andreas Lauhoff, Stephan Lauhoff, Nik Schweiger, principal designers*
Architect: *Deitz Joppien Architeckten*
Consultants: *Lightpower GmbH (show lighting); Karlen (specialty lighting); Meso (digital media systems); Screen.NT (hardware, video); medienprojekt p2 (media); Teamtec Media Technology (installation)*







Bed Restaurant Silk (above and right) offers the most subdued environment, with 170 neon lamps with pink-colored filters washing the walls and hung fabric.

theatrical/club luminaires, including spotlights and stroboscopes. A deejay and veejay can perch within a control booth fabricated of polystyrene panels and cantilevered over the dance floor. They get a full view of the floor and stand ready to change the music or 360-degree projections on the wall and other surfaces. Also within the club—whose aesthetic might remind some clubgoers of the captain's bridge aboard the Starship Enterprise—sits a 325-square-foot stage.

The membrane wall is inset at floor level with 13 oval pods—or cocoons—upholstered in vibrant green faux leather; here, guests can lounge between dances or view the action out on the floor. Five additional cocoons on the upper level of the wall serve as VIP skyboxes, while a separate VIP lounge accommodates 20 patrons.

The circulation path that rings the membrane wall provides access to the food and beverage venues. In Between—a lounge sandwiched between the wall and an expansive restroom—measures 6,500 square feet and showcases a cherry blossom design motif on its floors, walls, and lampshades. Cold-cathode tubes backlight glass-fronted display cases set into the wall, below the bar, and four freestanding light boxes.

The 3,400-square-foot Micro Club restaurant, off the club's entrance, offers modular seating and tables. While some patrons dine, others can enjoy cocktails. Later, the room transforms into another dance venue. Complementing the musical changes are multiple lighting effects. As the tempo and volume of the soundtrack ramps up, so does the intensity of the lighting. It's a visual and psychological progression intended to peak the energy level of the dining and drinking patrons to get them on the dance floor, according to club impresario Sven Våth. Micro's focal



Designing *with* LIGHT

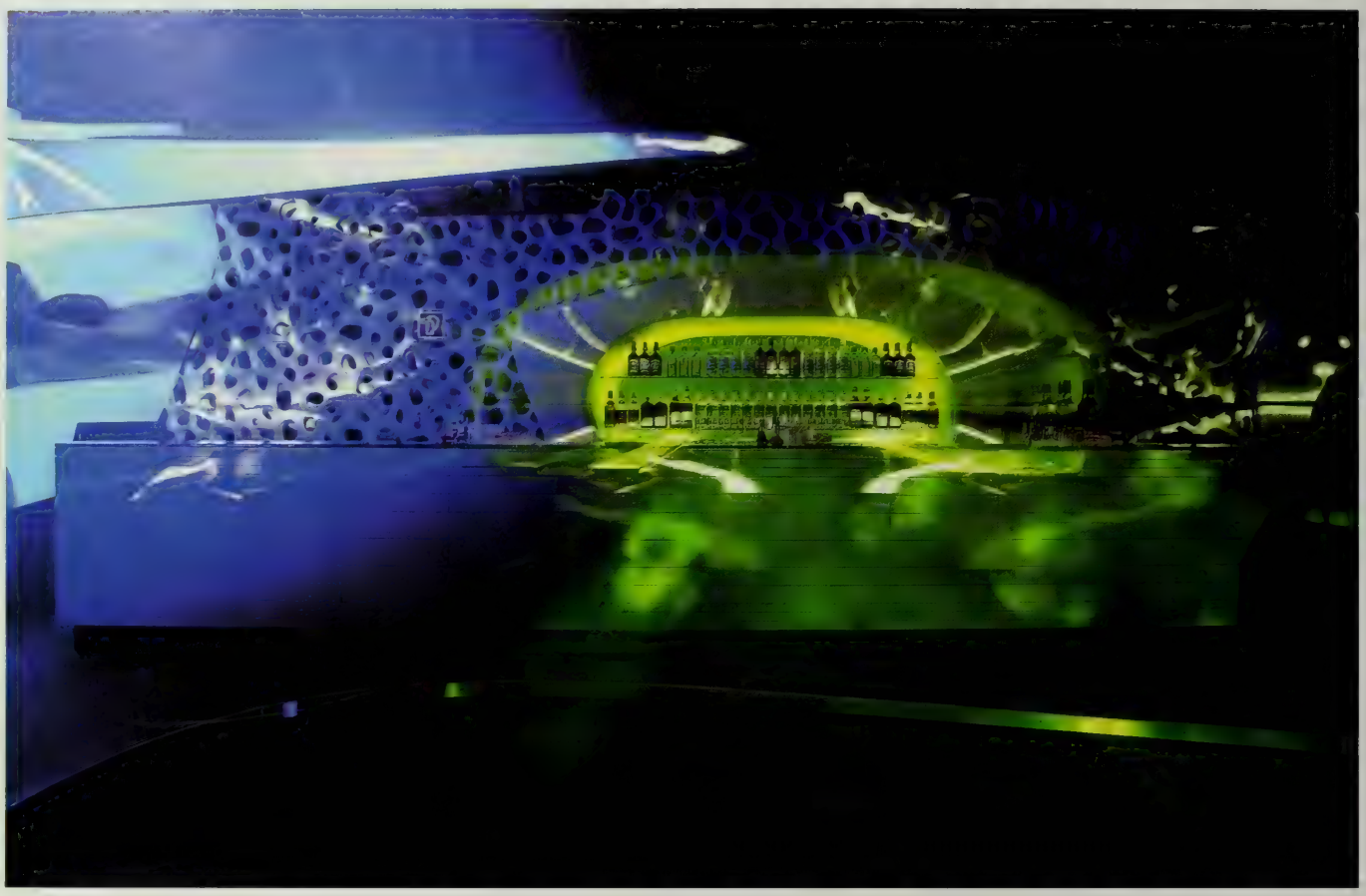
Are you designing with light?
Now there's an easier way. At **www.designingwithlight.com** you can explore architectural lighting solutions, get budgetary pricing, lead times, fixture schedules and application guidelines – all in a personalized project workspace.

While visiting, also request our new visual selection catalog for **Designing With Light**.

© 2005 Genlyte Group LLC. All rights reserved. www.lightolier.com

LIGHTOLIER®

CIRCLE 63 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



A bar adjacent to the deejay booth is backed by a membrane wall custom fabricated of cast concrete (top). Black terrazzo flooring combined with a mix of tile provides a crisp aesthetic that complements colored light while offering easy maintenance (below).



lighting feature is a fiber-optic matrix comprising hundreds of thin, fiberglass tubes illuminated by 13 digital light projectors, two of which are on motor-driven swivel mounts. Luminaires and dimmable downlights also shine, while laminated-glass tabletop items and a glass bar top and shelving are lit by amber LEDs. And, of course, a disco ball also descends and spins.

A more restful ambience engages diners in the adjacent Bed Restaurant Silk that accommodates up to 66 in eight bedlike seating areas covered in white leather. American birch floors complement a ceiling covered in white fiberglass-threaded fabric. Panels of semitransparent gauze serve as room dividers. Neon fixtures fitted with pink filters subtly backlight the walls. Four pendants composed of embossed polystyrene foil, Plexiglas ribs, and nylon thread hang throughout the restaurant, functioning as reflectors for washes of light.

The splashy club has set an elevated standard for nightlife in Frankfurt. And while the life of many European clubs becomes shorter as new venues always seem to arrive on the scene to steal their thunder, it will be interesting to see how this complex continues to evolve to keep the social butterflies returning to the Cocoon. ■

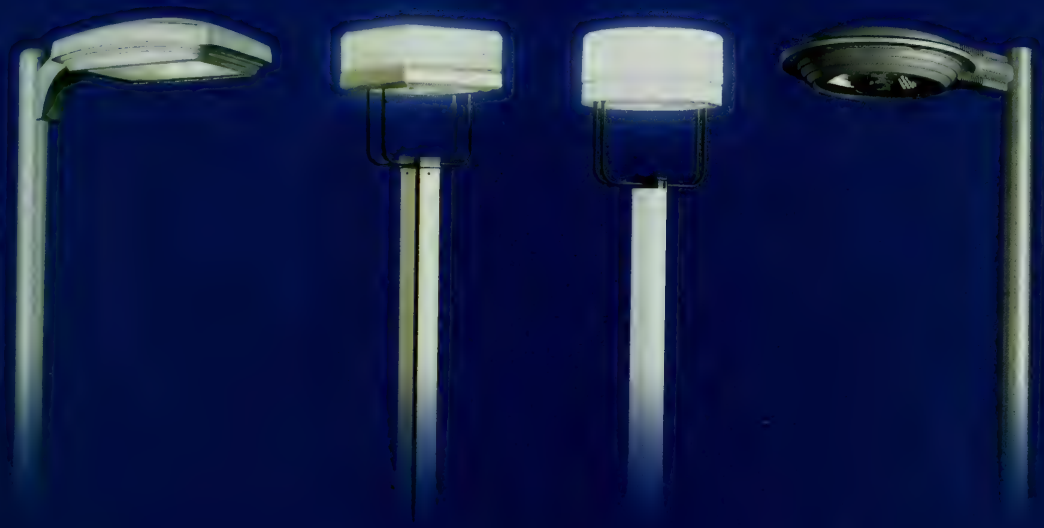
Sources

Automated luminaires: *Clay Paky*
Custom luminaires (design/fabrication): *3deluxe*
Furniture: *Kessler*
Fabrics: *Eickelmann*
Acrylic glass: *Polymehr*
Aluminum ornaments: *Reborn*
Sound technology, controls: *JBL; Community; Crown; customization by Steve Dash*

For more information on this project, go to Lighting at **www.architecturalrecord.com**.


TEKA
ILLUMINATION
Enduring Materials
Advanced Technology
Classic Design
86 Gibson Road #3
Templeton, CA 93465
T (805) 434-3511
F (805) 434-3512
info@teka-illumination
www.teka-illumination.com
Circle No. 148


PERFORMANC
SLEEK.
SENSUAL.
Stylish.
GARDCO



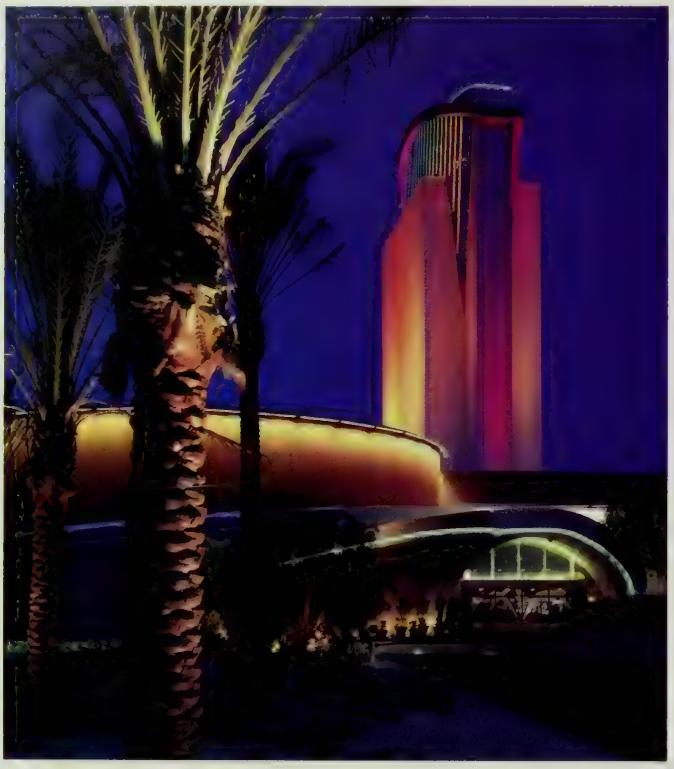
Gardco site luminaires flow from poles, effortlessly, minimally, elegantly. The styling is confident, subtle, satisfying from every vantage. Their illumination is uniform, glare-free, site-specific. From 10' to 40', 50 to 1000 watts, Gardco designs are thoughtfully proportioned for roadways, parking lots and pathways and are the original high performance luminaires.

GARDCO
LIGHTING

www.sitelighting.com

CIRCLE 65 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

California's **Morongo Casino Resort** becomes a bright desert oasis, with layered lighting by Visual Terrain





The nighttime view of the Morongo resort centers on the illuminated 27-story hotel tower (top and above). Rather than cast light upward into the desert skies, the designers mounted automated downlights at the top of the building (top and above). Cold-cathode and decorative fixtures add flash to the casino (opposite).

By William Weathersby, Jr.

About 20 miles west of Palm Springs, the Morongo Casino Resort and Spa rises from the California desert like a rock formation stretching skyward. Inspired by the site's picturesque mountain ranges, sun-streaked vistas, and canyons carved by wind and water, the new $250 million resort pays tribute to the landscape through its architecture and illumination. Design architect Jerde Partnership International and executive architect Thalden Boyd Architects collaborated with the lighting design firm Visual Terrain on interior and exterior lighting that takes its cues from the surrounding topography and quality of light.

Commissioned by the Morongo Band of Mission Indians, the complex sprawls across 44 acres with a low-rise casino; a 310-room hotel tower; ancillary restaurants, nightclubs, and spa; plus a villagelike enclave of swimming pools and private cabanas. The dramatically illuminated 27-story tower can be seen on approach from as far as 5 miles away. "In terms of exterior illumination, the architects and clients wanted to animate the building," says Visual Terrain principal Dawn Hollingsworth. "The illumination color palette is restricted to colors found in the natural light of the desert during sunrise, midday, and sunset."

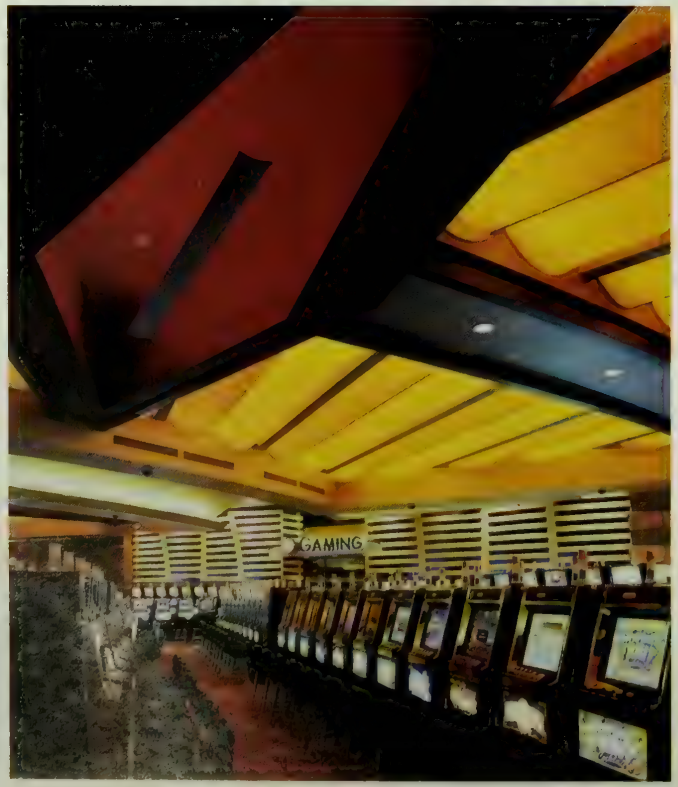
Senior project lighting designer Matt Levesque orchestrated an outdoor media and light show that guests may view from dusk until dawn. "The goal was to attract the attention of arriving hotel and casino patrons," he says, "with illuminated elements that tell guests they are about to embark on an entertainment adventure." The curtain wall at the top of the tower's entrance elevation employs projected video, graphic, and LED effects for a stylized collage depicting organic elements of nature. Automated luminaires wash the lower sections of the tower with colored light to extend a unified image. "We didn't want to design just another color-changing building," says Hollingsworth. "The colors blend into each other via the number of fixtures and their precise focus."

The exteriors also required special considerations addressing the nonurban night sky. "One of the design challenges was to decide whether to adhere to the dark-sky ordinances in nearby municipalities," says project designer Lisa Passamonte Green. (Exterior lighting levels were at the discretion of the design team, however, because the sovereign nation of Morongo itself does not have a dark-sky ordinance.) "We wanted to minimize how we approached the overall exterior and landscape illumination," she continues. "It's the first time our firm has ever downlit

Project: *Morongo Casino Resort and Spa, Cabazon, California*
Lighting designer: *Visual Terrain—Dawn Hollingsworth, managing partner; Eileen Thomas, Matt Levesque, Jerry Windle, Lisa Passamonte Green, Stacey Westbrook, Francis Mempin, project team*
Architect: *The Jerde Partnership International (design); Thalden Boyd Architects (executive)*
Interior design consultant: *Hirsch Bedner Associates*
Electrical engineer: *RHR Consulting Engineers*
Electrical contractor: *Berg Electric*







In the resort's main casino area, custom downlight pendants focus tightly over gaming tables (above); one fixture model spotlights blackjack stations while a companion unit covers craps tables. Faceted ceilings employ integral lighting, including LEDs, keyed to the colorful panels (left).

an entire facade (on the lower portion of the building) with the fixtures being mounted on top of the structure and focused downward."

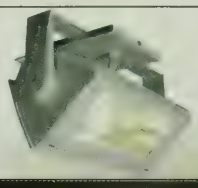
The success of the lighting hinged in part on a computer animatic, or animated rendering, of the Morongo project that the architects produced for the client at the outset. "That was very helpful in getting a real sense of the vision of the project, the creativity that the architects were bringing to the table," says Hollingsworth.

The shape of the porte cochere, for example, is an abstraction of a giant desert bloom: The arc of each petal-like component measures more than 30 feet tall, with a center pistil that rises another 30 feet. The approach road and routes around the porte cochere are lit by 40-inch-tall bollards, strategically placed so as not obscure views of the structure.

The casino interiors, designed by Jerde with Hirsch Bedner Associates, evoke the Southwest with stone, glass, and wood surfaces without directly referencing Native American culture. The ceiling's design—with multiple planes, angles, and transition points—drove the floor and lighting plans. "The canopy is really four or five difficult ceilings that transition into each other," Hollingsworth says. To complicate issues further, each of the ceilings was clad with varied materials and finishes.



COOPER LIGHTING ARCHITECTURAL OFFERINGS

Lumière Coronado 710	**Ametrix** Vault	**Shaper** High Performance Pendants	**Corelite** Navigator II
			

Versatile and distinctive architectural lighting solutions that enrich any environment.
Inquire about the industry's most trend-setting architectural products.

COOPER Lighting

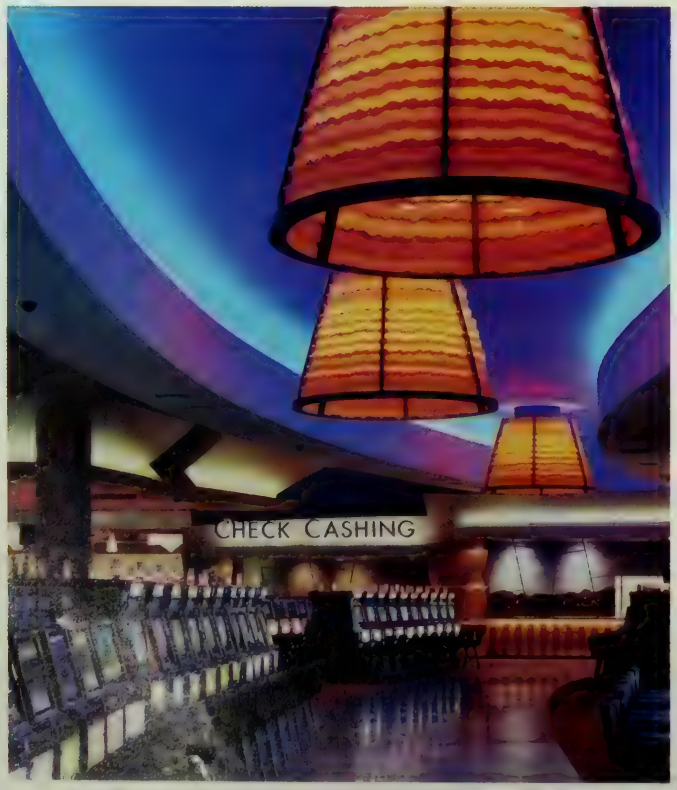
www.cooperlighting.com

Class A Perf shown in application photo.

CIRCLE 66 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

A cascading bead-within-water wall surrounds a casino bar (right). Layered lighting from fluorescent strips, LEDs, and decorative fixtures orchestrates a heightened visual terrain. Striped-shaded pendants lead patrons toward the slot machines (below).





"It was hard to understand the ceiling plans in a 2-dimensional drawing, or even in an elevation," recalls interior lighting designer Eileen Thomas. "The Jerde Partnership eventually built small-scale models of the different types of ceilings, so we could comprehend the configuration, then figure out how to light the ceiling plane."

Lighting the gaming tables, curved custom downlight pendants spread like boomerangs across the open space. In other gaming areas, pendants with striped shades cast an amber glow against a ceiling backdrop invigorated by blue and mauve light from cold cathode.

The breakneck buildout schedule, not atypical for the new generation of tribal casinos (California alone has 50), was daunting for the lighting design team; from initial design meeting to opening spanned only 23 months. "We broke ground before the drawings were finished," Hollingsworth recalls. The drawings got finished after the ground breaking, and even then there were still things we had to coordinate and change as budget issues came up." Lighting, she notes ruefully, often becomes a value-engineered wild card. When all the Morongo cards were on the table, however, the team achieved a full house of energy and light. ■

Sources

Interior ambient lighting: *Birchwood; Focal Point; Kirlin; Halo; Architectural Cathode*

Interior decorative lighting: *Visa; Lumid*

Downlights: *Spectrum; Portfolio; Contrast; RSA*

Task lighting: *Translite-Sonoma*

Exterior lighting: *Hydrel; Hevilite; Martin; Northstar/Thorn; Elliptipar; Gardco; Metalux; Selux; iLight*

For more information on this project, go to Lighting at **www.architecturalrecord.com**.



CIRCLE 67 ON READER SERVICE CARD OR GO



CIRCLE 68 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

LiteForms®

Walk the well-lit path to innovation with Prescolite's LED cylinders. The new LD4 family provides a new solution to achieve illumination patterns on vertical surfaces and paths of egress. Developed based on Advance® LED technology, Prescolite's specification grade LD4 cylinders are suitable for a wide variety of applications, including building exterior, column, and corridor illumination where maintenance costs are of primary concern. To learn more about Prescolite's innovative 4" LED cylinders, visit **www.prescolite.com** or **call 888-PRS-4TEC**.



ABOVE & BEYOND prescolite



Architectural Area Lighting

A Subsidiary of Hubbell Lighting Inc.



Retail Commercial Educational

www.aal.net

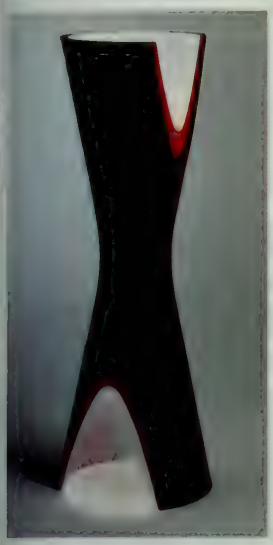




CIRCLE 69 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Lighting Products Euroluce

Jazzy lamps shone brightly at the Euroluce show accompanying the Milan Furniture Fair in April. Highlights reviewed here include a lamp by Norman Foster that mimics his architecture. *William Weathersby, Jr.*





▲ Murano light magic

The venerable Venini Studio, renowned for its luxurious Murano glass vases, sculpture, and interior fittings, has expanded its line of lighting fixtures with dramatic new designs. Selena (above left), designed by Emmanuel Babled, is a satin-finish-nickel table lamp that comes in three color combinations: crystal/white/coral/gray; crystal/white/sulphur yellow/straw yellow; and crystal/white/ivory/orange. The dimmable fixture uses a 60-watt G9 lamp. Circo di Lune (above right) is a table lamp composed of hand-blown-glass spheres in different colors surrounding a luminous sphere within a satin-finish-nickel basket. Designed by Monica Guggisberg and Philip Baldwin, the lamp comes with spheres in the color combinations white/black/gray or white/red/amber. Venini, Venice, Italy. www.venini.com **CIRCLE 200**

► Halley shoots for the stars

Lucesco Lighting, a new company specializing in the use of LED technology for general lighting systems, has unveiled Richard Sapper's Halley lamp line. The high-precision designs allow the joints of the sleek desk, floor, or wall lamps full three-dimensional maneuverability with solid stability. Sapper, the designer of the iconic Tizio lamp in 1972, came out of retirement to design for the new manufacturer. The Halley lamps are constructed of aluminum and steel primary components with some plastic molding. Each lamp's 16 LEDs produce light equivalent to a 35-watt halogen while only consuming 18 watts of power. Knoll is the exclusive distributor of the Halley Collection for the contract market. Lucesco, Palo Alto, Calif. www.lucesco.com **CIRCLE 202**



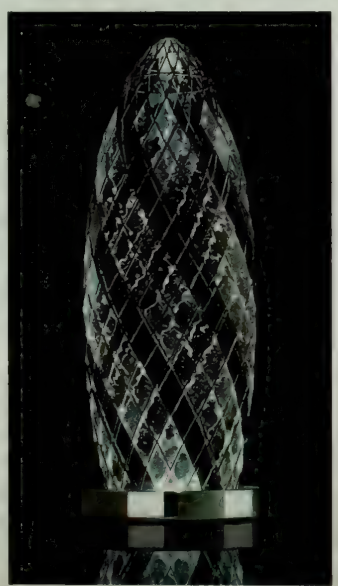


▲ Mirror, mirror

German lighting innovator Ingo Maurer has introduced Trotzdem, a line of tables with integral task lights, accompanied by coordinating mirrors and accessories. Constructed of Corian, the desk is approximately 13' long x 4½' wide. It is fitted with an adjustable task lamp, vases, pens, and a computer connection. *Trotzdem* is German for "in spite," and Maurer says he put the table into production although it was originally intended as a custom object for a client who canceled the commission. Ingo Maurer, New York City. www.ingo-maurer.com **CIRCLE 203**

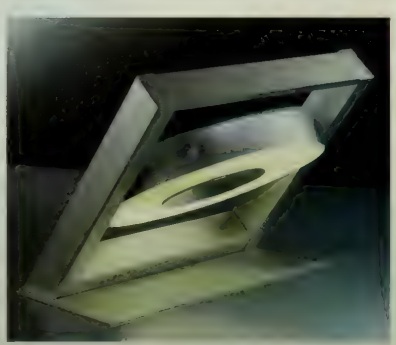
► Glowing Gherkin

As an homage to his own London tower at 30 St. Mary Axe, commonly referred to as the "Gherkin Building" because of its picklelike shape, Norman Foster has designed a table lamp blown by Kundalini's Murano master craftsmen. The production method is the specialized technique of mouth-blown triplex glass. The lamp is handcrafted using thin, metal-coated water glass assembled with a complex Tiffany-like technique. In addition to the standard Gherkin models, a limited, numbered edition signed by Foster will be distributed through design and art galleries. Also shown at the fair were new lamps by Karim Rashid. Kundalini, Venice, Italy. www.kundalini.it **CIRCLE 201**



► Compact beam

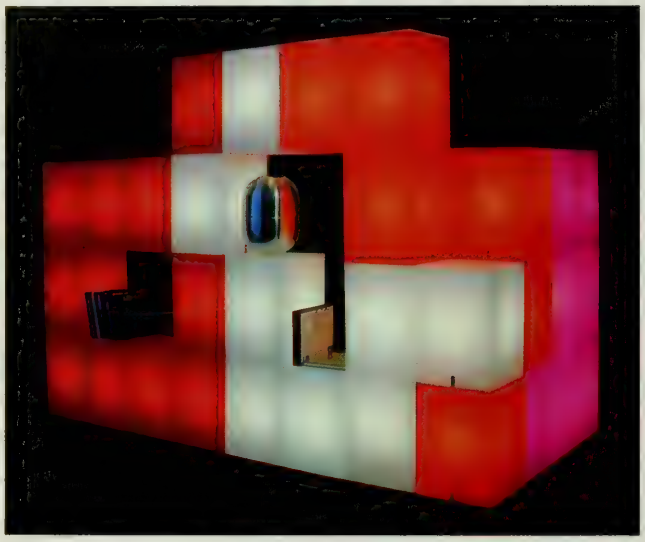
The Appollonia line of lamps from Movelight includes single- and double-suspension table, wall, and ceiling lamps, plus a floor lamp. The frame is extruded, anodized aluminum, and the lenses are white satin finish and mirrored glass. The center element can be rotated 360 degrees, with one side featuring clear glass and the other side mirror. Energy-saving bulbs are included with the fixture. Also on display at Euroluce was the Belladonna collection of handblown-glass table lamps and pendants available in a range of colors. Movelight, Quarto d'Altino, Italy. www.movelight.it **CIRCLE 204**



Lighting Products Euroluce

▼ Bright building blocks

French architects Laurence Bourgeois and Elisabeth Hertzfeld are the duo behind Remake Design. They have introduced the Remake Light, a 9" x 6" illuminated cube. "It's a simple object, a light that can be multiplied without additional wires," Bourgeois says. Available in orange, pink, red, white, gray, and black, the translucent, modular lighting units can create illuminated structures that double as furniture, partitions, or shelving. The low-voltage lighting elements are 10-watt, 24-volt xenon lamps, whose illumination level is equivalent to the foot candles cast by a 40-watt incandescent lamp. One plug-in cord can power from 8 to 24 modules. Remake Design, Paris. www.remake-design.com **CIRCLE 205**





◄ Up to the task

Jean-Marc da Costa's Slice lamp cuts a fine profile as an elegant task lamp. Easy to install (plug-and-play) and delivering power and network integration capabilities, its controls can be linked to ambient light levels via a presence detector, or combined with centrally controlled light-management systems. The U-shaped base can be attached to a desk leg, and the lamp swivels 180 degrees, providing lighting to every corner of a desk. At maximum power, which can illuminate two workstations, the fixture uses about 170 watts. Serien Lighting, Rodgau, Germany. www.serienlighting.com **CIRCLE 207**

► No-frills foot candles



The Gìo collection of luminaires introduced by the Italian manufacturer Macrolux includes a wall-mounted version (right) or a floor-lamp model providing direct and indirect illumination. The Minimalist fixtures can accommodate either a 40-watt halogen, 7-watt compact fluorescent, or 20-watt metal-halide lamp. Philips Mini-Mastercolor electronic ballasts and bulbs are included with the luminaire. A variety of metal and matte exterior finishes are available. Also unveiled at Euroluce was Gloss, a recessed, adjustable downlight housing an AR111 lamp, and Book, an ambient lighting fixture shaped like a book, which can be wall-mounted either vertically or horizontally. Macrolux, Zoppè di San Vendemiano, Italy. www.macrolux.net **CIRCLE 208**

► Lighting filaments flaunt filigree

Complementing a range of upholstered furniture, bedding, and wood tables and chairs, decorative light fixtures from IPE Cavalli display a flourish of filigree and ornamentation. The Visionnaire Collection, conceived and coordinated by Samuele Mazza (manager of the Visionnaire shop in Milan) and architect Alessandro La Spada, blends neo-Gothic designs with contemporary function. The lighting line, which includes ceiling-mounted pendants, table lamps, and floor lamps, is produced by Italamp for the Visionnaire Collection. IPE Cavalli, Zola Predosa, Italy. www.ipe.it **CIRCLE 206**





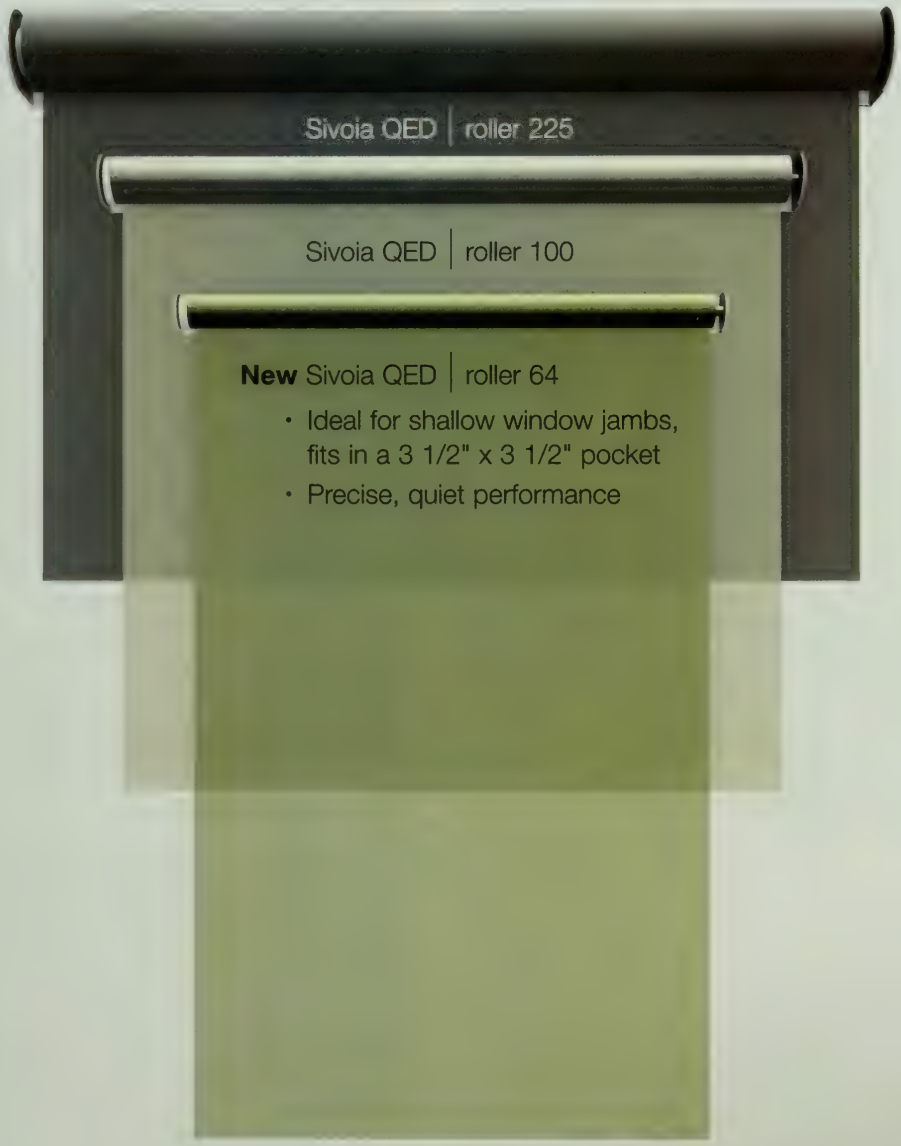
▲ Sculptural landscape

Designed by Tim Derhaag, the 45 Collection encompasses floor, wall, or ceiling luminaires for indoor/outdoor use. The extruded aluminum alloy body features rustproof protection. Fixtures are available in satin-finish, anodized aluminum, matte black powdercoat, or teak surfacing. The luminaires are available in the following approximate dimensions: 8" long x 8" high; 8" long x 17" high; 8" long x 39" high; 17" long x 8" high; and 17" long x 17" high. The lamping for each model is either one 20-watt PG J5 or a 24-watt 2G11 bulb. Also showcased in Milan were new lighting fixtures by Antonio Citterio. Flos, Huntington Station, N.Y. www.flos.com **CIRCLE 209**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

Sivoia QED | **roller 64** | the newest member of the **Sivoia QED family**

Now, the ultra-quiet and precision alignment of Sivoia QED is available for virtually any window



Visit **www.lutron.com/shadingsolutions** or call **1.877.258.8766 ext. 557** to learn more about **Sivoia QED** | **roller 64.**

LUTRON

Lutron controls your light.

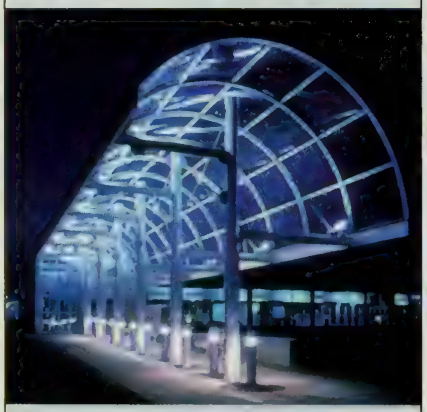
2005 Lutron Electronics Co., Inc.

CIRCLE 70 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

CPI
INTERNATIONAL
Quality Comes to Light™

World Class Leader in Translucent Canopies and Walkway Covers





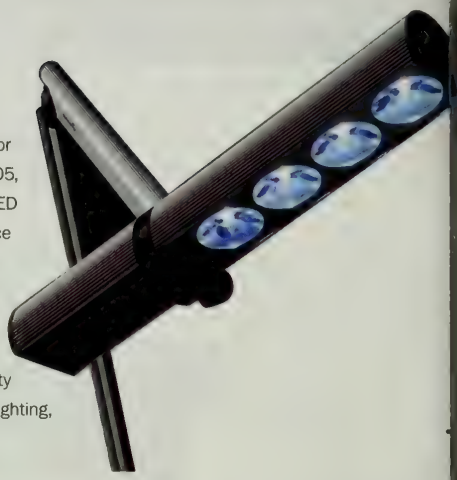


Made With Tight-Cell TECHNOLOGY

Phone (800) 759-6985
www.cpidaylighting.com

CIRCLE 71 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Lighting Products



► Cool desktop task light

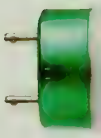
Waldmann Lighting took home a "Best of Category" award for interior luminaires for the Diva LED task light at Lightfair 2005, held last April in New York City. Designed by Porsche, Diva LED features cool-to-the-touch white LEDs that are ideal for office desktop areas, as they produce virtually no heat. The lamp's adjustable head features a ribbed design made from extruded aluminum with an anodized finish. Spring-balanced adjustable arms (which also feature an extruded aluminum/anodized finish) meet the requirements of a variety of work-area configurations and desktop sizes. Waldmann Lighting, Wheeling, Ill. www.waldmannlighting.com **CIRCLE 210**



◄ Floating on a media cloud

At the CeBIT 2005 trade show in Hannover, the booth for mobile telephone provider O2 Germany featured Element Labs' new Versa PIXEL system. The display consisted of Versa Pixels placed at the end of plastic tubes suspended from the ceiling. The varying tube lengths and spacing created distinct colored pixels that merged into waves of images, giving visitors the impression of moving beneath a 3D "media cloud" with images and text floating across it. The new Versa PIXEL line gives designers freedom over pixel shape and placement—including intricate 3D arrangements. Element Labs, Austin, Tex. www.elementlabs.com **CIRCLE 211**

► Lowest consuming T8



Philips recently introduced the 25-watt Alto Energy Advantage T8 system, the lowest energy-consuming 4-foot T8 system on the market. It operates on instant-start or programmed-start ballasts that supply a starting voltage equal to or greater than 550. The lamp reduces energy consumption by over 45 percent in applications using T12 lamps and magnetic ballasts, and by 20 to 30 percent for applications using conventional T8 lamps and electronic ballasts. Philips Lighting, Somerset, N.J. www.philips.com **CIRCLE 212**

► Tunable lighting

Ralph Reddig Design presented its newest lighting designs during the 2005 ICFF held in New York. Designed as an interactive piece, the Horizontal Slider encourages the user to play with the quality and composition of light. Horizontally adjustable, the lamp's simple components—frame, bulb carrier, and cord—act upon diverse surfaces to create a tunable range of light intensity and feel. The Slider mounts to the wall using integrated hardware, and features a cast-acrylic diffuser lens; an aluminum frame, backer, and carrier; and a frosted-acrylic diffuser end panel. Ralph Reddig Design, Holland, Mich. www.reddigdesign.com **CIRCLE 213**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

quiet down & lighten up
with QUILITE®



Noise Barriers

Post/Panel System of Polycarbonate Modules
Corrugated on Both Sides for
Noise-cutting Performance
Light Transmission
Graffiti Resistance

QUILITE®
INTERNATIONAL

8616 La Tijera Blvd, Suite 509, Los Angeles, CA 90045
Tel 310.641.7701 Fax 310.641.7768 info@quilite.com quilite.com

CIRCLE 72 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



UPLIGHT / DOWNLIGHT

Compact Fluorescent

Metal Halide

QL Induction

DELRAY
LIGHTING
INCORPORATED

www.delraylighting.com

CIRCLE 73 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



We've done the work for you!

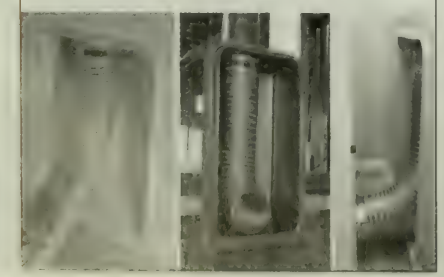
- 16 different CAD Blocks
- Available in AutoCAD format
- DWG, DXF, PDF & GIF formats
- Engineering Reports & Letters

Available online at
www.dryerbox.com
CD available upon request
888.443.7937



- Saves Space
- Saves Energy
- Reduces Fire Hazard

1 Hour F Rating
wood or metal frame



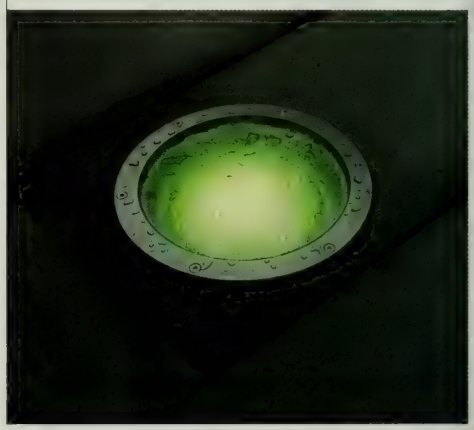
CIRCLE 74 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Lighting Products



▲ Spotlight on another era
Jonathan Browning's luxe line of fixtures takes inspiration from the French industrial and decorative arts of the 1920s, '30s, and '40s. The arms and bodies of all sconces and chandeliers are cast in hand-polished bronze, and are triple-plated in silver or nickel. The Chapelle sconce (above) features a magnified 60-watt incandescent bulb. Jonathan Browning, San Francisco. www.jonathanbrowninginc.com **CIRCLE 215**

▼ Inground color system
The Martin Inground 200 was awarded "Best Product of the Year" at Lightfair 2005. The Inground 200 Series is a range of inground luminaires for illuminating facades, columns, landscapes, and interior applications. The series offers three different color systems: a simple static color, a palette of six colors, or the full spectrum CMY color system. Three different lens systems are currently available for a variety of beam-angle options: medium, wide, and very wide. Martin Architectural, Woodland Park, Colo. www.martin.com **CIRCLE 214**





▲ Spec-grade downlights, under 3 inches
At 2⅛" diameter, the Evolution Three-Inch family of MR16 recessed luminaires offers the smallest aperture available with specification-grade performance and glare control. Three-Inch offers a complete palette of interchangeable optical assemblies, including general downlighting, adjustable accent, wall washing, and wet location. A Push-Lock trim retention system accommodates ceilings up to 2" thick and allows for tool-free attachment. Lightolier, Fall River, Mass. www.lightolier.com **CIRCLE 217**

▼ Illuminating and graceful
The Grace collection is a line of decorative fixtures fabricated with textured glass and intricately polished parts. The long, 2" x 14" blown-vessel shade features an amber-colored base and golden fumed overlay. Handcrafted from solid brass and finished with polished nickel plating, the collection consists of two pendants and three sconce designs with incandescent lamping. Neidhardt, Redwood City, Calif. www.neidhardtinc.com **CIRCLE 216**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

HUBBARDTON FORGE access HAMPSTEAD LIGHTING AND ACCESSORIES LBL Lighting A19 sea gull lighting



THOUSANDS OF LIGHTING PRODUCTS AVAILABLE ONLINE • PROJECT MANAGEMENT TOOLS • SPECIAL PRICING TO THE TRADE

Exclusive Offer!
Visit the address below for more information
http://www.lightinguniverse.com/ar

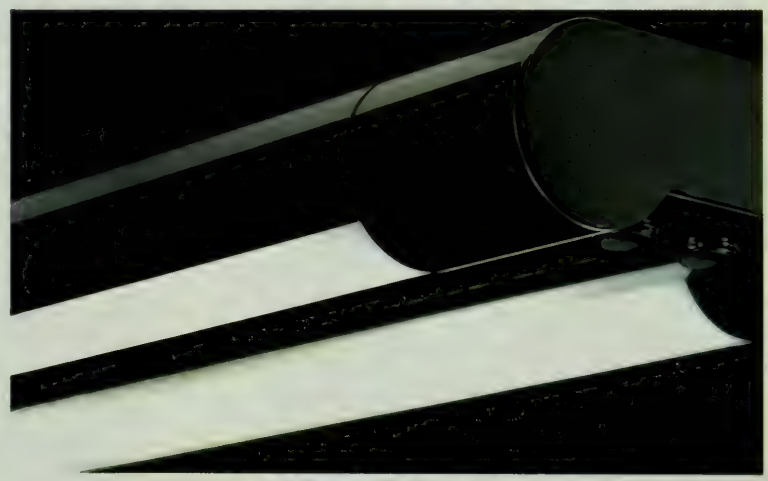
CIRCLE 75 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Lighting Universe.com
888.404.2744
info@lightinguniverse.com
http://www.lightinguniverse.com/ar



ARCHITECTURAL DETAILS
10930 116th Ave. NE, Kirkland, WA 98033
(425) 822-1292 • FAX (425) 822-1263 • www.arch-details.com
Purchase online at http://www.lightinguniverse.com.

CIRCLE 77 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Sensuous Tableau fixture rotates 120° to perfectly adjust mirror lighting. Quiet, flicker-free and shadow-free. Appealing high color rendering. Lengths to 54", white or polished chrome. Alkco exclusive.
T 847 451-0700





ALKCO
alkco.com

CIRCLE 76 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



SketchUp®

Award-winning!

SketchUp is a must-have 3D tool for busy architects. It's unique user interface allows for quick, easy 3D model creation, modification and presentation without a steep learning curve.

And... SketchUp works and plays well with CAD and multimedia applications!

Mac or Windows $495.

Macworld · Macworld Best of Show · CADENCE · Editors' Choice WOW!

Download your FREE trial:
www.sketchup.com

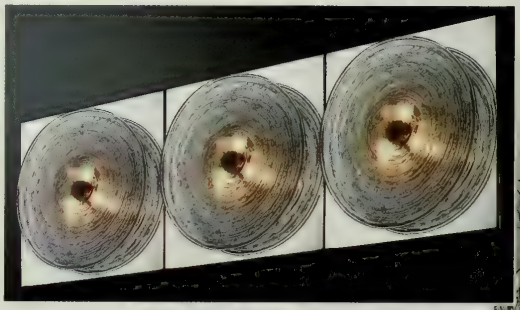
CIRCLE 78 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Lighting Products



◄ Dramatic lighting centerpiece

New Metal Crafts introduces a dramatic custom fixture for residential or commercial installations. The traditional fixture is constructed of iron with a painted black finish and is decorated with stamped leaves, fleur-de-lis cutouts, and hanging rings, and is topped with a pointed crown. Rope tubing rods connect each of the three tiers. Standing 7' tall by 60" in diameter, the chandelier is illuminated by 44 "candle" lights. The fixture can be custom made in two tiers or a single tier and has matching sconces and a pendant fixture. New Metal Crafts, Chicago. www.newmetalcrafts.com **CIRCLE 218**

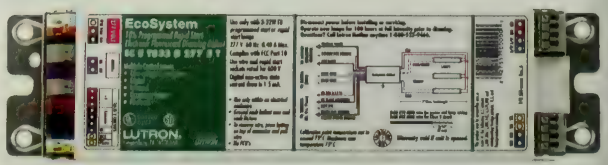




▲► Motion frozen in glass

From the delicate twisting of tree branches to pearlescent drops of water, the 16 designs in Andromeda's DesignAlive Collection capture nature in the medium of Venetian glass. Brio (above) features a hand-spun glass disk floating on a stainless-steel plate and is available in clear Venetian crystal, and red or black glass. Used individually or clustered, Brio's incandescent lamps, available as a wall sconce or ceiling lamp, provide soft illumination. Livia (right) features organic stems of clear Venetian crystal that rise from a shiny nickel frame to highlight the structure's sleek, twisting form. Livia uses halogen, fluorescent, and LED light sources and is available as a wall sconce, floor lamp, or hanging lamp. Leucos USA, Edison, N.J. www.andromedainternational.it **CIRCLE 219**

► Winning ballast system



The new EcoSystem ballast for fluorescent lighting control from Lutron Electronics was another "Best of Category" winner at this year's Lightfair, taking home the top award for ballasts and transformers. The EcoSystem ballast provides daylighting, occupant sensing, personal control, and buildingwide control for any size project. It facilitates any combination of sensors or wallstations to control the lighting environment and energy costs of a space without interface or power packs. Lutron Electronics, Coopersburg, Pa. www.lutron.com **CIRCLE 220**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



CIRCLE 79 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

TERRAZZO ALWAYS MAKES THE GRADE



Terrazzo's durability and excellent lifecycle costs makes it a top tier choice in the flooring industry. Nonporous and mold-resistant, Terrazzo earns high marks on any campus. To keep your flooring solutions steady on track, become well-schooled in the wide color palette and unlimited design possibilities of Terrazzo.

Terrazzo — a floor that truly performs!

Contact us at: 1.800.323.9736

or visit us at: WWW.NTMA.COM

Terrazzo

A PERFORMING ART

Job Name: Alverno College
Location: Milwaukee, WI
Architect: Eppstein Uhen Architects

CIRCLE 80 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Products

Landscape Options

From residential backyards to hotel poolsides, the following **landscape products** allow people to enjoy the great outdoors with minimal hassle. Cleverly designed furnishings, **intelligent gardening aids**, and other products that make outside living more enjoyable are the focus this month. *Rita Catinella Orrell*

Outdoor furnishings with a touch of Dutch whimsy make their U.S. debut





The cocoonlike plu'MO chair is designed for high-impact locations (left). The windBLOKKER provides privacy indoors or out (right).

The casual outdoor furnishings from Netherlands-based Freeline furniture made their U.S. debut at this year's International Contemporary Furniture Fair. Priced to appeal to discerning but more value-conscious costumers (pieces start at $185), the cleverly named items use a variety of materials, including teak and other hardwoods, synthetic and natural rattan, textylene, aluminum, and stainless steel. The pieces work equally well in casual kitchens, sunrooms, decks, patios, and other lawn/garden settings.

Several collections from the company will be spotlighted in the Houses at Sagaponac, a high-profile Southampton development featuring the works of 34 influential Modern architects. Sagaponac developers selected Freeline's cocoonlike plu'MO wicker resort chair, with an outsize half-circle form; the beSKWERE 4 outdoor bistro/dining set; and tjik'NRUN, a table/bench combo for the outdoor spaces of the house designed by Selldorf Architects of New York City.

Other products in the collection include basketCASE, a natural rattan chair; windBLOKKER, a teak/textylene screen for indoor/outdoor use; and hükSED, a teak corner table/chair set. The exclusive North American distributor is Jane Hamley Wells. Jane Hamley Wells, Chicago. www.janehamleywells.com **CIRCLE 221**





GreenVista Seed Germination Blanket (above) keeps seeds in place and aids in soil erosion control. DuPont's Weed Control Fabric (right) prevents weeds from stealing nutrients from plants.

New line of landscape products protects the garden, fights the pests

DuPont GreenVista garden products are a new line of residential and professional landscape products launched at this year's International Builders' Show in Orlando. DuPont's Weed Control Fabric, the centerpiece of the new line, blocks weeds from growing and stealing valuable nutrients from plants, while still allowing water, air, and nutrients to pass through to the plants' roots. Common uses include placing the fabric under mulch, pebbles, stones, and rocks, beneath patios and walkways, under decking, around drains, or behind retaining walls. The fabric is guaranteed to last 15 years when properly installed and covered with 3" to 4" of mulch.

Other introductions in the line include Deer and Bird Netting designed to discourage unwanted deer and birds from eating delicate plants and shrubbery, and landscape anchor pins that secure all types of DuPont landscape fabrics.

As part of a second product rollout, DuPont introduced a protective GreenVista Burlap to help control erosion, keep seeds and plants in place, hold moisture, and promote seed germination, as well as provide protection from harsh climate conditions. A biodegradable Seed Germination Blanket made of excelsior wood fiber and mesh netting will help grass seed germinate and thrive. DuPont GreenVista Products, Wilmington, Del. www.dupont.com **CIRCLE 222**

▼ Turning a backyard into a great room

Fire Stone Home Products' new Outdoor GreatRoom includes an outdoor gas-convection-range island, choice of fireplace or firepit, and a pergola (below). To customize the Outdoor GreatRoom, clients choose a style of Fire Stone Pergola and a grill island with a 24" or 36" Legacy outdoor range. A sink, refrigerator, and other outdoor kitchen amenities can be added. To complete the room, clients choose between a Fire Stone Campfire or outdoor wood- or gas-burning fireplace. Fire Stone Home Products, Minneapolis. www.firestonehp.com **CIRCLE 223**

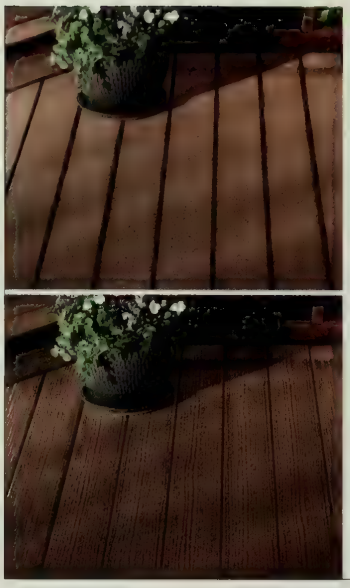




▲► Sleek teak furnishings



Kingsley-Bate has introduced several new additions to its line of teak outdoor furniture. The Algarve Deep Seating group (above) features the durability of solid teak with Sunbrella-brand cushions. Designed by Frederic Spector, the line is suitable for residential or commercial use. The Asian-inspired Mandalay Group has been expanded to include a bar set, new chaise, eight-seater square table, and backless bench (above right) in both 5' and 6' lengths. This complements the existing dining set, 54" backed bench, and deep seating already available. Kingsley-Bate, Manassas, Va. www.kingsleybate.com **CIRCLE 226**



◄ One plank, two looks

Each TwinFinish 5/4 deck plank from TimberTech features two sides with entirely different surface textures. The traditional brushed surface texture (top left) provides a uniform exterior look by texturing the plank's surface to increase exposure of the wood elements within the TimberTech composite material. The wood-grain texture (bottom left), provides the look of vertical grain lumber and ensures that no repetitive pattern will be seen on the deck. The 1'-thick, 5½"-wide planks are available in 12', 16', and 20' lengths. TimberTech, Wilmington, Ohio. www.timbertech.com **CIRCLE 224**

► Take me out

Hinson introduces the I.O. fabric collection, the company's first entry into the indoor/outdoor fabric market. Intended for upholstery, cushions, and umbrellas, the fabrics are fade- and mildew-resistant, and woven in the U.S. of solution-dyed, 100 percent acrylic. The collection features squares, dots, stripes, striés with bold overlay trellises, and simple striés. The squares, dots, and stripes are reversible in colorways of navy, beige, and tan with white, or forest or black with off-white. Coordinated solids are also available. 212/475-4100. Hinson & Company, Long Island City, N.Y. **CIRCLE 225**



▼ Even better than the real thing?

Claimed to look and feel like natural blades of grass, JM Synthetic Grass polyethylene grass substitute can replace real grass on residential yards, parks, day-care centers, athletic facilities, road medians, and housing developments. For schools and playgrounds, the company installs a state-approved, customized application to dirt, asphalt, blacktop, cement surfaces, or even rooftops. The "grass" can be applied to virtually any surface, and features a built-in drainage system and weed barrier. JM Synthetic Grass Surfacing, Rutherford, N.J. www.jmsyntheticgrass.com **CIRCLE 227**



EXTRAORDINARY.
ANY WAY YOU SLICE IT.





Natural rock cut thin. Exquisite brick cut thin.
Made beautiful by Robinson Brick Company.

ROBINSON BRICK COMPANY
SINCE 1880

800-477-9002 RobinsonBrick.com/Record

CIRCLE 81 ON READER SERVICE CARD OR GO



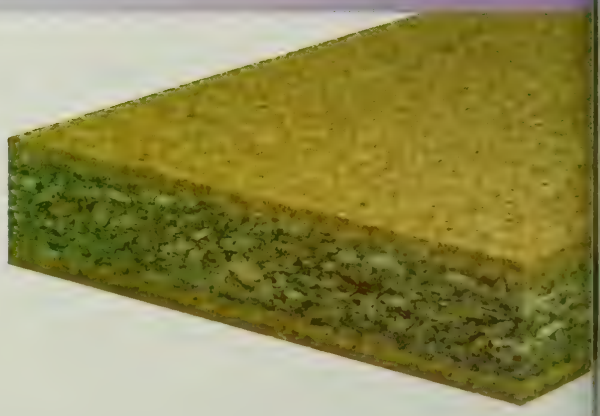
INTRODUCING SkyBlend

ANOTHER ENVIRONMENTALLY FRIENDLY ROSEBURG PRODUCT

PRODUCED FOR A FRESHER, CLEANE TOMORROV

IN TODAY'S MARKET WHERE ENVIRONMENTAL ATTRIBUTES ARE **DRIVING** PURCHASE AND SPECIFICATION DECISIONS, SKYBLEND™ IS THE PERFECT SOLUTION.

- SkyBlend is a **NEW** low emission, SCS certified particleboard with **No Urea Formaldehyde added** in manufacturing.
- SkyBlend formaldehyde low emissions (0.00 - 0.04 ppm) are a breath of fresh air.
- SkyBlend may contribute to achieving **LEED™ points**.
- SkyBlend's blue tinted core assures easy identification as the specified green building particleboard in the field.
- SkyBlend can be a specified substrate for our melamine, hardwood plywood, vinyl and UV cured finishes.



Call us today to find out more about why you should specify SkyBlend™
800-245-1115

ROSEBURG
FOREST PRODUCTS
P.O. Box 1088 • Roseburg OR 97470
www.rfpco.com

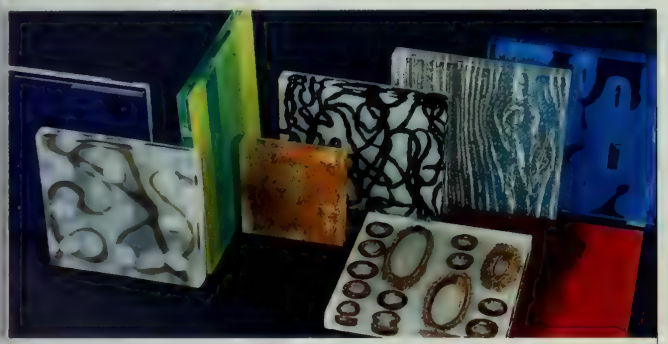
CIRCLE 82 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs



▲ Beneficial babble

Sonare Technologies, a Herman Miller company, introduces Babble, an award-winning technology that provides voice confidentiality in open-plan work environments. Babble connects to the telephone and sends the user's voice out in multiplied and "babbled" form through proprietary speakers arranged in the work area. Those in the user's immediate area hear what sounds like an indiscernible, low-volume group conversation. Sonare Technologies, Chicago. www.sonaretechnologies.com **CIRCLE 228**



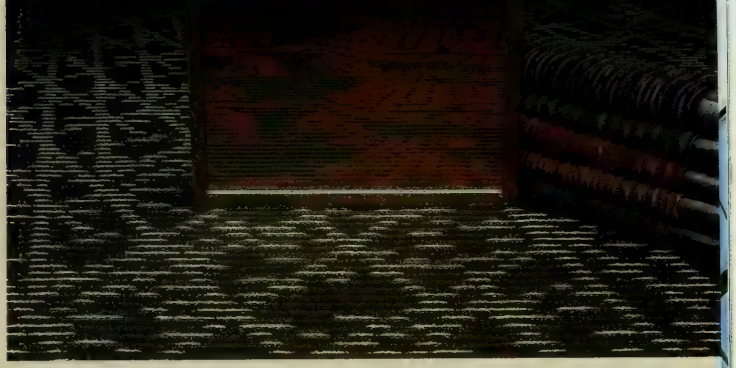
▲ Suspended animation

Lumicast Folio, from Skyline Design, is a new collection of objects and pigments suspended in a clear polymer. Unlike laminated sheet products, all panels are hand-cast by artisans to exact specifications, eliminating excess waste. Most 3D objects less than ⅝" in thickness can be successfully cast in a panel. Offered in standard thicknesses of ¾" and in sizes up to 55" x 117", the material's light-transmitting quality makes it appropriate for feature walls, light diffusers, and most vertical applications. Skyline Design, Chicago. www.skydesign.com **CIRCLE 230**



◄ Image transfer process

Infused Imagery, a material innovation for metal, fiberglass, glass, and acrylic surfaces, won a Gold Award for Deepa Textiles in this year's Best of NeoCon Surfacing Materials category. A patented image-transfer technology allows the image to become part of the substrate, giving it the hardness of epoxy with the flexibility of urethane. The technology carries a Class A fire rating as well as a low-VOC-emissions rating. Deepa Textiles, San Francisco. www.deepa.com **CIRCLE 231**



Product of the Month Product 2Faced

Using a patent-pending manufacturing technology developed by Lees, Product 2Faced achieves an optical illusion through tufting and multiloop pile heights. Taking home an Innovation Award in this year's Best of NeoCon competition, the broadloom carpet's use of 4D tufting technology plays with multiple pile heights to virtually hide colors, depending on the angle from which it is viewed.

Available in both broadloom and tile, Product 2Faced offers a color palette of 15 clear, saturated, yarn-dyed colors to complement the product's three patterns: I-spy, Alter Ego (carpet shown above on the floor and reflected in the mirror), and Still Moving. Lees collaborated with the Chicago-based multidisciplinary studio CleverSpin, which utilized time-lapse photos, X-ray imagery, and other time-based or transformative images, to develop synchronous patterns around the idea of time and change.

Product 2Faced features Duracolor stain-resistant dye technology and is Scientific Certification Systems and CRI Green Label Plus certified. Lees Carpets, Kennesaw, Ga. www.leescarpets.com CIRCLE 229



◄ High grades

The most eye-catching textile on display at this year's NeoCon trade show, and winner of an Editor's Choice Award, was designed by industrial designer Cory Grosser. Gradient is the first fabric in the industry to graduate smoothly from one color to another on different scales. Through a rigorous design and production process, more than 100 yarn colors have been custom dyed to Grosser's exact specifications. A spectrum of eight gradients and 16 solids that match the end colors of each gradient are available in a subtle rib weave for seating and a smooth satin weave for panel. Each combination is available on vastly different scales, including a 144" repeat, a 36" repeat, and an 18" repeat. Textus, Irvine, Calif. www.memosamples.com **CIRCLE 232**

Product Briefs

▼ Iconic design, with a twist

Bryce and Kerry Moore, the husband-and-wife design team behind Context Furniture Manufacturing, both parody and celebrate the iconic look of a chair from the 17th century with the William and Mary series of chairs and tables. To produce the series, silhouettes are cut out of wood sheet goods, then stacked and fused. Leafing in contrasting woods provides a striped effect when the layers are sliced. Some of the tables come with an aluminum base. Context Furniture Manufacturing, Royal Oak, Mich. www.contextfurniture.com **CIRCLE 233**



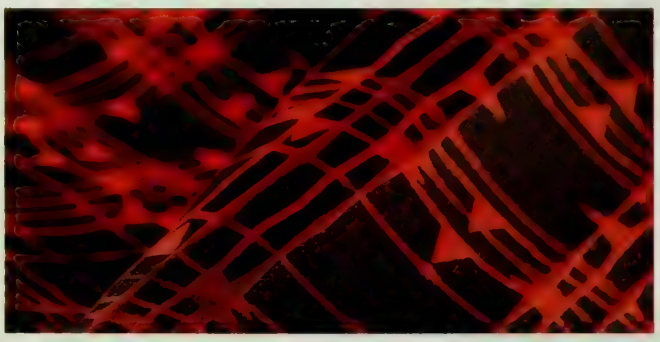


▲ It's hip to be square

For the L7 collection for Shaw Contract, Bruce Mau Design interpreted individual carpet tiles as "pixels" of color in a range of pattern scales. According to principal Bruce Mau, working with Shaw was "one of the best collaborative processes I've ever been involved with." To achieve the color richness and depth intended by the Bruce Mau Design team vision, Shaw employed a new technology that allows for precision cutting in tufted carpet that is typically only seen in printed products. L7 features two broadloom products and four tile products, and won a Gold Award at NeoCon for modular carpeting. L7 offers the environmental benefits inherent in carpet constructed of Eco Solution Q fiber and EcoWorx tile backing. Shaw Contract Group, Dalton, Ga. www.shawcontractgroup.com **CIRCLE 234**

▼ Chair body art

One of Carnegie's latest introductions, Tattoo, interprets the art of body tattooing into woven upholstery textiles. Wired (below) is inspired by ancient tribal imagery; Co-Exist has graffiti-influenced flare; Soleil features sun symbols; Ink celebrates the contours of the body; Full Sleeve symbolizes fully tattooed arms or full suites of abstract tribal patterns; and Flash Art represents the source of inspiration for the tattoo artist. Carnegie, Rockville Centre, N.Y. www.carnegiefabrics.com **CIRCLE 235**





▲► Students take home top honors

This year, Bernhardt sponsored an interdisciplinary course at the Art Center College of Design in Pasadena, California, to give young designers the opportunity not only to create products appropriate for the market and the company, but also to work within the constraints of mass production. Ultimately, eight products designed by seven students were selected for marketing, launch, and distribution. The designs include Float (above), a cubic table designed by Ana Franco, formed of two folded wood or glass pieces and connected by a thin slice of metal, and Emi (right), a lounge chair designed by Emi Fujita that channeled her skills as a sculptor and calligrapher. The collection took home top honors with the Best of Competition at this year's NeoCon, as well as the ICFF Editors Award for New Designer, giving the students a great boost to their young careers. Bernhardt Design, Lenoir, N.C. www.bernhardtdesign.com **CIRCLE 237**

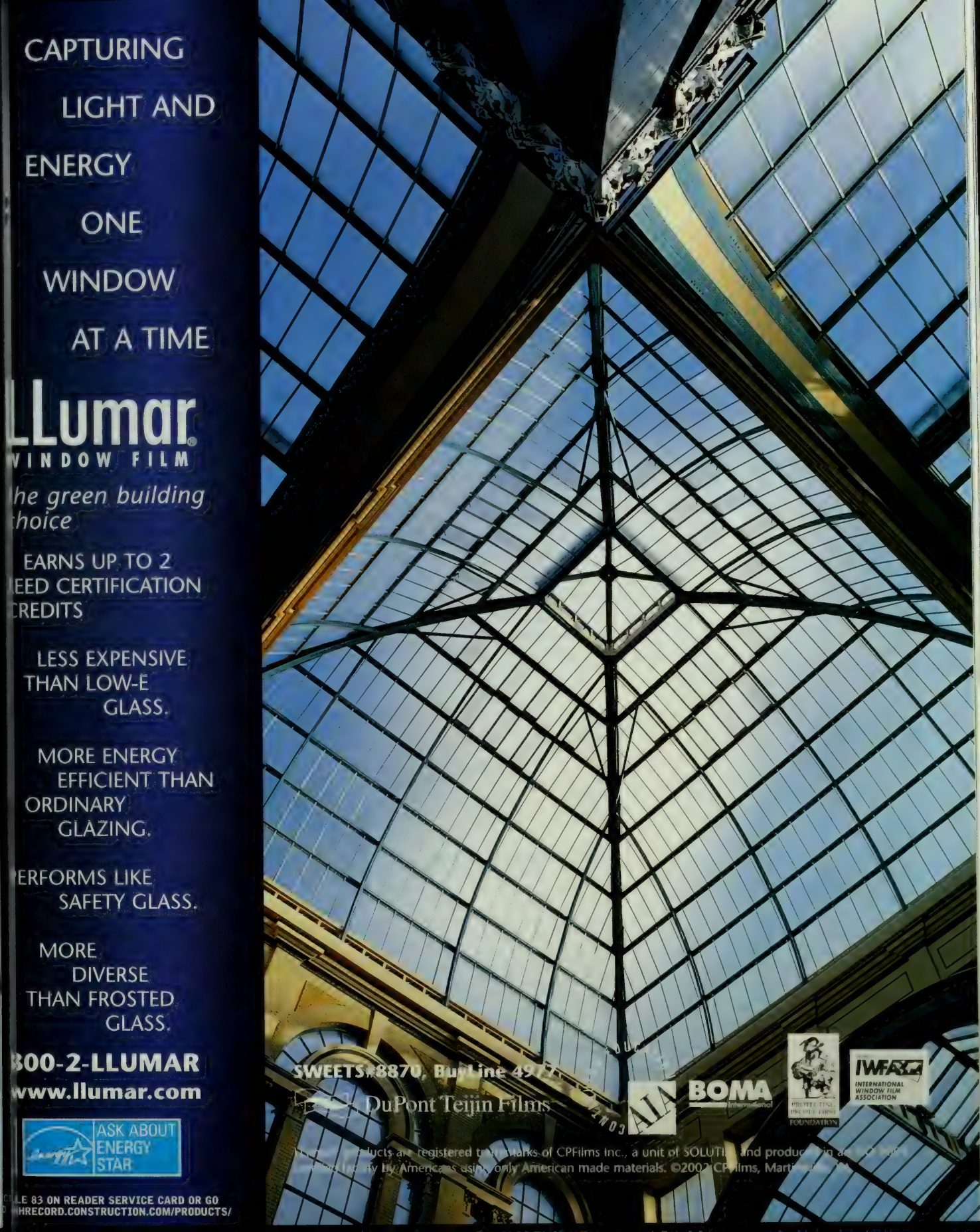


► Clearly safer fire door

A collaboration between glass supplier Vetrotech Saint-Gobain and hardware supplier Grand View Glass & Metal, the All-Glass fire-rated door is currently the only such product available in North America, and was the first ever developed in the world. The All-Glass door has a 20-minute fire rating, making it ideal for office door applications located in 1-hour-rated corridors. It utilizes Vetrotech's Safeglass, a float glass product made of earth alkaline silicate. Vetrotech Saint-Gobain, Auburn, Wash. www.vetrotech.com **CIRCLE 236**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.


CAPTURING
LIGHT AND
ENERGY
ONE
WINDOW
AT A TIME
LLumar
WINDOW FILM
he green building
choice
EARNS UP TO 2
EED CERTIFICATION
REDITS
LESS EXPENSIVE
THAN LOW-E
GLASS.
MORE ENERGY
EFFICIENT THAN
ORDINARY
GLAZING.
ERFORMS LIKE
SAFETY GLASS.
MORE
DIVERSE
THAN FROSTED
GLASS.
800-2-LLUMAR
www.llumar.com
ASK ABOUT
ENERGY
STAR
SWEETS#8870, Burl ine 49
DuPont Teijin Films
BOMA
IWFA
INTERNATIONAL
WINDOW FILM
ASSOCIATION
PROTECTING
PEOPLE FIRST
FOUNDATION
ducts are registered t marks of CPFilms Inc., a unit of SOLUTI and produc ig a
ly by Americans usi only American made materials. ©2002 CPFilms, Mart
LE 83 ON READER SERVICE CARD OR GO
HRECORD.CONSTRUCTION.COM/PRODUCTS/

Vitracolor™ GLASS

OPAQUE COLORED GLASS IS STRIKING IN STRIPES

Glass for interior and exterior surface applications. Thirty striped and solid colored offerings.

SKYLINE DESIGN
ARCHITECTURAL ART GLASS

Tel: 888.278.4660
www.skydesign.com

Made in Chicago

CIRCLE 84 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs



◄ Digitally color-printed glass

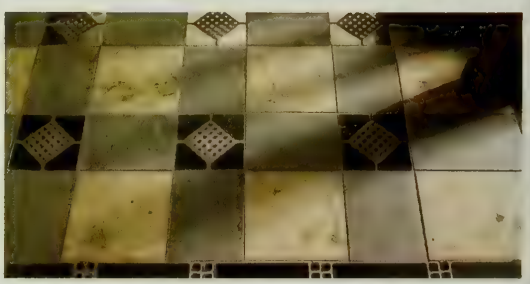
Okacolor, new from Schott, uses a specially developed glass-coating technique that allows the complete reproduction of black-and-white and multicolored images, as well as solid-color coatings on heat-strengthened or tempered float glass. The glass can be used as monolithic single glazing, in laminated glazing, or insulating glass, depending on coating buildup. For the Tanaka Business School at Imperial College in London (left), Foster and Partners specified an Okacolor wall featuring the reproduction of an MRI of a human brain, designed by Danish artist Per Arnoldi. Schott N.A., Elmsford, N.Y. www.us.schott.com **CIRCLE 238**

► Windows to meet a growing market

To offer a better solution for architects needing easy-to-operate, high-performing, and historically compliant double-hung windows in large sizes, Marvin has introduced the Ultimate Double Hung Magnum. The window allows designers to use large wood windows where they previously had to use an alternate material to meet performance standards. Expected to be available in fall 2005, the window meets a commercial design pressure rating of H-C50 for window openings nearly 5' wide and 9' tall. Larger sizes are available at a commercial design pressure rating of H-C30. A spiral balance system allows the large window to achieve easy, smooth operation. Marvin Windows and Doors, St. Paul, Minn. www.marvin.com **CIRCLE 239**







◄▲ Jewelry for the walls and floors

Rocky Mountain Hardware has added a line of cast-bronze tiles to its collection of handcrafted bronze architectural hardware and accessories. Cast in solid bronze, the tiles are suitable accents for floors, countertops, and shower walls, or can be grouped to cover an entire surface, such as a backsplash. The tiles are available in two types of bronze, seven patinas, and more than 70 styles, including Clover (left) and Offset (above). A proprietary "grout through" tile design features preset channels that create the effect that several pieces of bronze were set individually. Rocky Mountain Hardware, Hailey, Idaho. www.rockymountainhardware.com **CIRCLE 240**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



WAUSAU WINDOW AND WALL SYSTEMS

1 877 678 2983

WAUSAUWINDOW.COM

DEADLINES **BUDGETS** SPECIFICATIONS

SEE THROUGH IT ALL

WAUSAU WINDOW AND WALL SYSTEMS

ADVANTAGE BY WAUSAU PRE-ENGINEERED WINDOWS

Right
THE WAY YOU WANT IT

CIRCLE 85 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Stone River Bronze









door hardware • accessories
hinges • cabinet hardware
bath hardware
window & patio door

classic series • designer series

StoneRiverBronze.com

CIRCLE 86 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs

► Flush with style and safety

An alternative to the ubiquitous hockey-pucklike devices seen on most ceilings, the Modern Smoke Detector from Architectural Devices uses a patented design to lie recessed and flush-mounted to the surface of a wall or ceiling. The detector can be hardwired, hardwired with battery backup, or battery-powered, and can be made part of a whole building alarm system. The smoke detector uses recyclable plastic and a photoelectric sensor rather than older technology, which contains small amounts of radioactive material. The detector is currently undergoing U.L. testing and is expected to ship by the end of the year. Architectural Devices, San Francisco. www.architecturaldevices.com **CIRCLE 241**





◄ Cleaner shower with less water

Sloan Valve's Act-O-Matic 2.5-gpm-flow showerheads use a pressure-compensating flow control that provides a consistent and powerful flow at low pressures, saving water. The chrome-plated, all-brass showerheads incorporate a self-cleaning spray disc that eliminates sand and other particles after each use. When the water is turned off, the disc retracts to its fast-drain position, and sand and other particles are then washed away. The fast-drain position also prevents residual slow dripping after showerhead use. Act-O-Matic standard models come with or without a thumbscrew, and there is an institutional style with integral mounting flange. The models are available in four finishes. Sloan Valve, Chicago. www.sloanvalve.com **CIRCLE 242**

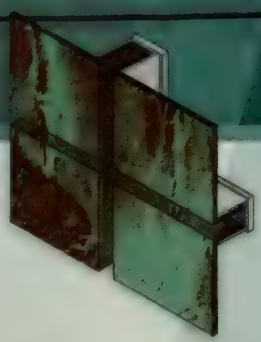
► Tintable commercial exterior glass

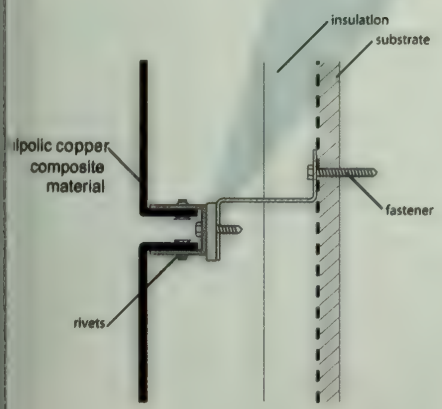
Wausau has teamed with SAGE Electrochromic glass to offer Sage Glass electronically tinted windows. Now available on a limited basis for commercial, institutional, and health-care buildings, the windows help control glare, reduce heat gain, and block ultraviolet rays while increasing the benefits of daylighting and maintaining a connection to the view outside. SAGE produces SageGlass lites by coating float glass with several layers of invisible ceramic material, then fabricates these coated lites into IGUs. Wausau then glazes the IGUs into its aluminum framing systems. Once shipped to the site, the windows are installed into the building's electrical system and are operated individually by the occupant or automatically by the energy-management system. Wausau Window and Wall Systems, Wausau, Wis. www.wausauwindows.com **CIRCLE 243**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.







PROJECT: New England Biolabs | Boston, Massachusetts
ARCHITECT: Jung-Brannen Architects
SYSTEM/FABRICATOR: Rout and Return Open Joint | Ipswich Bay Glass
PRODUCT: ALPOLIC®'s Copper Composite Material (CCM) Post Pre-Patina Finish

THEY DON'T BUILD THEM LIKE THEY USED TO. THEY BUILD THEM BETTER, WITH ALPOLIC®.

When a Massachusetts based biotechnology company wanted their new laboratory building to convey the company's proud heritage, their architects chose panels of ALPOLIC® Copper Composite Material (CCM), consisting of a thermosplastic core bonded between two thin sheets of copper. In addition to offering a zero maintenance finish, ALPOLIC® Copper composite panels feature the same superior durability, flatness, strength and ease of fabrication found in all ALPOLIC® Aluminum and Metal composite materials. But the ALPOLIC® Copper panels offered still another advantage: to satisfy the architect's design intent, their genuine copper surface could be treated with a unique patina process to make them look as if they had aged naturally for years! For a look that conveys the image you want, look to the global innovators of Metal Composite Material (MCM). Look to ALPOLIC®. For more information, call 1-800-422-7270 or visit us at www.alpolic-usa.com.

ALPOLIC®
Reflecting The Future, Today.

©2005 Mitsubishi Chemical America, Inc. All Rights Reserved

CIRCLE 87 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Custom Entrances

GOVERNMENT



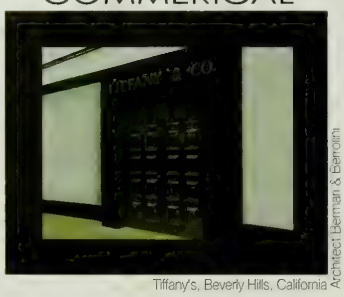
Superior Courthouse, Hartford, Connecticut Architect: The Maintech Associates

EDUCATIONAL



Tufts Dental School, Denver, Colorado Architect: Perry, Dean & Associates

COMMERICAL



Tiffany's, Beverly Hills, California Architect: Berman & Bertolini

RESTORATION



Temple Emanuel, New York, NY Architect: Dan Barlieuce PC Architects

DAWSON DOORS

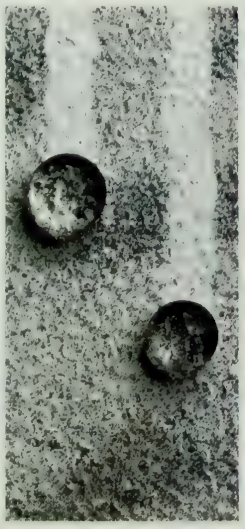
Since 1946

BALANCED · SWING · SLIDING · METAL CRAFT

visit us at www.dawsondoors.com
716.664.3811

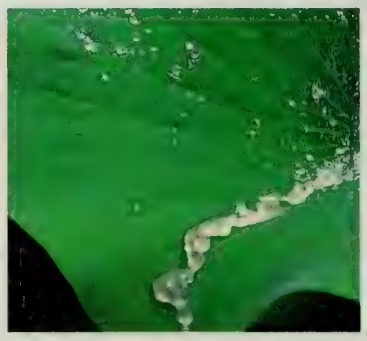
CIRCLE 88 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Briefs



◄▼ Borrowing some technology from Mother Nature

Lotusan is an exterior coating recently introduced into the North American market by Sto that features a pronounced self-cleaning effect. Modeled on the microstructure of the lotus leaf (below), the coating features Bionics technology that imparts super-hydrophobic properties to the coating. The "Lotus Effect" is actually a natural phenomenon discovered on the Asian lotus plant: After each rainfall, the plant leaves are immaculately clean and dry, as all the dirt has run off with the raindrops. The coating's self-cleaning effect (far left) makes it highly resistant to soiling, mold, mildew, and algae. Lotusan was first introduced in Europe in 1999 and has been applied to more than 300 million square feet of facade surfaces. Sto, Atlanta. www.stocorp.com **CIRCLE 244**



► Not seeing glass for what it is



While clear glass reflects 8 percent of visible light, Pilkington OptiView antireflective glass reflects less than 2 percent, allowing viewers to clearly see objects behind the glass without looking at their own reflection. Until now, antireflective glass was made by making clear glass, then dipping sheets of the glass into vats that contained a chemical composition that produced the antireflective properties—limiting the glass size to the vat size. Since the antireflective properties of OptiView glass are added during Pilkington's pyrolytic manufacturing process of float glass, there is greater size flexibility for applications such as retail store fronts and showrooms where antireflective glass was not previously an option. Pilkington N.A., Toledo. www.pilkington.com **CIRCLE 245**



◄ Three-component fire-stopping system

The FlameSafe FlowTrak system from Grace Construction Products is a new fire-stopping technology that addresses the limitations of conventional head-of-wall fire-stopping systems. Designed for applications into head-of-wall joints between the top of fire-resistive gypsum wall and floor/roof assemblies, FlowTrak provides a faster, cleaner, simpler, and more accurate alternative to the conventional "stuff and spray" technique, according to the manufacturer. The system features three components: metal tracks attached to the ceiling, polymer composite bags affixed to the tracks, and a nonshrinking, portland-cement-based fire-resistive material that forms a solid, permanent firestop. Grace Construction Products, Cambridge, Mass. www.graceconstruction.com **CIRCLE 246**

For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

BELDEN
THE BELDEN BRICK COMPANY

Canton, Ohio / (330) 456-0031
www.beldenbrick.com
An ISO 9001:2000 Registered
Quality Management System





Colors

Belden Brick is available in a world of colors including soft whites and creams, golden buffs and dusty tans, delicate pinks and cinnamon reds, chocolate browns, pewter grays and coal blacks. With so many colors to choose from, your options are truly endless. Here is a small sample of over 200 color ranges, 13 textures and 16 different sizes.

Landmarks in Brick

Sizes & Shapes

More sizes mean lower wall costs. With as many as sixteen different sizes to choose from Belden has the size you need. Plus, Belden has made thousands of special shapes to provide special details for individual projects. Need an "impossible" shape for your project? Then call Belden Brick and learn how the impossible can become reality.



Textures

Belden Brick offers thirteen different textures that range from silky smooth finishes to rugged randomly textured styles. Each texture can make its own distinctive contribution to the visual impact you seek.









CIRCLE 89 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



IMAGINE THE RITE DOOR®

The real beauty of this versatile door system is in your imagination.

We could tell you about all the advantages of The RITE Door for your commercial openings. Like how it has pre-installed hardware for trouble-free installation and performance, and how it fits perfectly with virtually any application—from hospitals and hotels to retail office spaces and schools. And, how it can also blend completely into the architecture or make its own design statement with its wide range of colors, textures and finishes. But, what really matters is all the ways you can imagine it.

So go ahead, use your imagination.

Visit www.adamsrite.com/theritedoor4 to see more. Or, call: 1.800.87.ADAMS or Email sales@adamsrite.com for further details.

Architect: Nadel Architects, Inc. *Installers:* Don La Force Associates, Inc.

ADAMS RITE
MANUFACTURING CO.

CIRCLE 90 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Literature

Controlling moisture

Centria has developed a handbook, titled *Studies in Advanced Thermal & Moisture Control*, that reviews the impact of mold and moisture on the building industry. The Centria recommendation for thermal and moisture control in exterior walls includes specifying nonporous materials, locating insulation outboard of steel studs, limiting the number of components and construction trades, specifying wall systems with rainscreen and pressure-equalized joinery, and specifying only single-component wall systems. Centria, Moon Township, Pa. www.centria.com **CIRCLE 250**

Track lighting spotlight

W.A.C. Lighting has introduced a new catalog on Precision Spots, a new line of upscale, specification-grade track heads for retail and commercial applications where high performance, fit, and finish are critical. The new line of track lighting was designed for retail spaces, museums, libraries, upscale homes, and other architectural environments. W.A.C. Lighting, Garden City, N.Y. www.waclighting.com **CIRCLE 251**

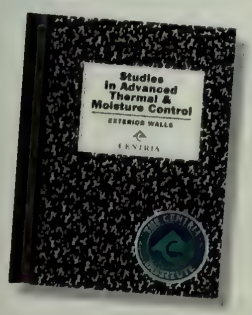
Steel market report

The American Iron and Steel Institute has published the *AISI Market Development Progress Report 2004–2005*, which provides an update on achievements made by AISI's Market Development member companies to keep steel competitive in the automotive, construction, and container markets. The report highlights market breakthroughs such as new steel bridge technologies being utilized in 42 states, a growth in the use of steel in the residential roofing market by over 400,000 tons, and the expansion of light-gauge steel framing in commercial and residential construction by over 2 million tons per year. American Iron and Steel Institute, Washington, D.C. www.steel.org **CIRCLE 252**

Easier to find lighting

Paramount Industries has released its latest full-line catalog. The reorganized catalog allows designers and engineers to quickly find the appropriate luminaire for their needs by application or product type. Photometric data is also now included with each product. Paramount Industries, Croswell, Mich. www.paramountlighting.com **CIRCLE 253**







For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.



Houston: ELEGANT ADDITIONS, Phone (713) 522-0088.
New York: AF NEW YORK, Phone (212) 243-5400.
DAVIS & WARSHOW, Phone (212) 688-5990.

MEM

With MEM, Dornbracht presents a new sphere of elemental fitting aesthetics. Its conscious understated approach turns the washing experience into a direct encounter with the element of water. Just like the surge of a clear, natural spring. MEM was designed by SIEGER DESIGN. Our brochure MEM may be ordered from: **Dornbracht USA, Inc.**, 1700 Executive Drive South, Suite 600, Duluth GA 30096, Phone 800-774-1181, Fax 800-899-8527, E-Mail mail@dornbracht.com www.dornbracht.com

CIRCLE 91 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



THE KEY REMEMBERS, SO YOU DON'T HAVE TO.

Lockerlock is secure, flexible, convenient and so easy to use. Simply present the key, and it will remember your locker number for you.

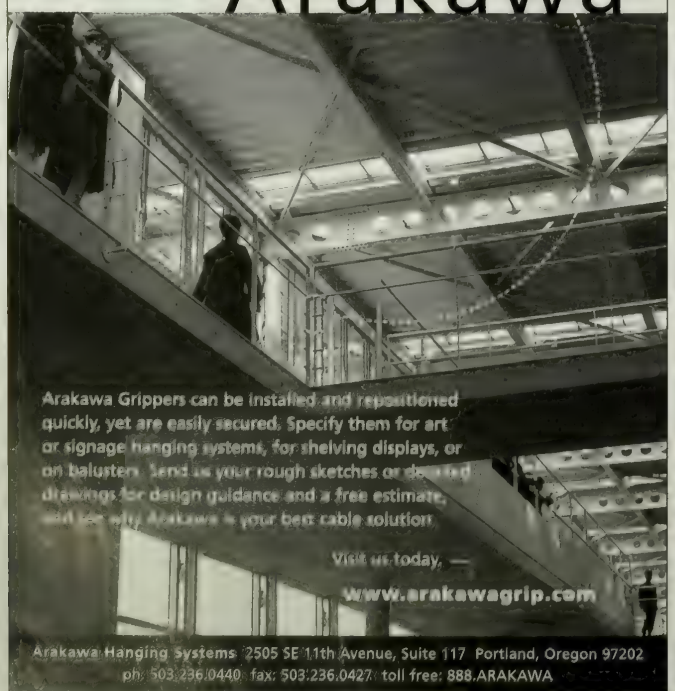
hafele.com
1-800-423-3531

HÄFELE
FINDING BETTER WAYS

CIRCLE 92 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

the ultimate cable system

Arakawa



Arakawa Grippers can be installed and repositioned quickly, yet are easily secured. Specify them for art or signage hanging systems, for shelving displays, or on balusters. Send us your rough sketches or detailed drawings for design guidance and a free estimate, and see why Arakawa is your best cable solution.

Visit us today, —

www.arakawagrip.com

Arakawa Hanging Systems 2505 SE 11th Avenue, Suite 117 Portland, Oregon 97202
ph: 503.236.0440 fax: 503.236.0427 toll free: 888.ARAKAWA

CIRCLE 93 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Product Literature

Educational pamphlet

TerraTEXT 5 is the latest educational pamphlet produced by Interface Fabrics to explain the issues that help the company reduce its environmental impact. The pamphlet is directed at "closing the loop" in the life of the fabric either through recycling or composting. It addresses how Interface Fabrics plans to collect polyester fabrics and turn them into viable products for resale, as well as how the new bio-based fabrics can be turned back into high-quality compost. Interface Fabrics Group, New York City. www.terratex.com **CIRCLE 247**

Clips and connectors catalog

Dietrich Metal Framing Systems offers a 144-page catalog titled *Metal Framing Clip, Connector, and Framing Hardware.* The catalog is divided into seven major product categories: deflection clips and connectors; head of wall deflection systems; rigid connectors; floor joist framing connectors; bridging, bracing, and backing systems; truss framing; fire-rated connectors; and specialty clips. Dietrich Metal Framing, Columbus, Ohio. www.dietrichmetalframing.com **CIRCLE 248**

NEW SITES FOR CYBERSURFING

Online custom blend tool for glass tile.
www.hakatai.com



Updated site allows visitors to seek info by performance-related system, product type, brand name, or application.
www.usg.com

Mirage Dreamer is a new Web-based personal design assistant for professionals and consumers.
www.miragefloors.com

Color posters

Alcoa Home Exteriors' new paint-deposit-chip posters serve as portable color tools that allow homeowners and contractors to see more than 700 colors available in their new DreamColor palette. The three posters, one from each product line—vinyl, and metal and injection molded (i.e., shutters and vents)—use paint deposits to depict the array of colors available. Alcoa Home Exteriors, Pittsburgh. www.alcoahomes.com **CIRCLE 249**



For more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

EVERYTHING ABOUT GREEN BUILDING...

UNDER ONE ROOF.



Over 100 Continuing Education Sessions

Green Building Workshop Tours with Unique Access to Projects

Internationally Recognized Master Speakers

Comprehensive LEED® Workshops

450 Green Product, Technology and Service Exhibitors

2005 Green Building Leadership and Design Excellence Awards

Whitehead Biomedical Research Building
© Copyright Jim Roof LEED-NC Silver

For three days in November, Greenbuild offers you an unequalled opportunity to learn about the latest developments in sustainable design from its leading practitioners...

- Tour the region's most innovative examples of green building followed by workshops led by the design teams, contractors and managers
- Learn the latest on the costs and benefits of building green through workshops and sessions designed to enhance your business, inspire your practice and improve your bottom line
- Participate in specialized programs specifically geared to practitioners of all levels, from emerging green builders to experienced designers
- Meet global leaders in the green building industry

See More.
Learn More.
Experience More.

REGISTER ONLINE NOW AT:
www.greenbuildexpo.org
Early registration discounts until September 1st

U.S. GREEN BUILDING COUNCIL

greenbuild
International Conference & Expo
Atlanta, November 9-11, 2005

©2005 U.S. Green Building Council. All rights reserved.


NEOPORTE
MODERN DOOR
grasslands
100% pure stainless steel – fully welded construction.
laminated + kiln textured glasses. cast and machined
stainless leversets. grade 1 full-mortise lockset.
built to your specifications in 8 weeks. made in the usa.
custom entry systems start at $4995.
as shown $6150
www.neoporte.com 1.877.711.210
showroom: 1550 18th street, santa monica, california
CIRCLE 94 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ARCHITECTURAL
RECORD

ATTENTION ALL BUILDING PRODUCT MARKETERS:

PLEASE SUBMIT YOUR NEW PRODUCTS TO ARCHITECTURAL RECORD'S PRODUCT REPORTS 2005

Product Reports will again be a major editorial feature in the December issue of ARCHITECTURAL RECORD, presenting the most interesting and useful new building products that will be available to the architect, specifier, and designer in 2006. A panel of architects, consultants, and editors will select products for publication from those submitted by September 2, 2005—and we very much want your company to be included.

Like every **Product Reports** since our first in 1972, this feature, which is an A&D reference to product introductions of the previous year, provides our readers with the most up-to-date information available.

There's no entry fee. Just review the product categories listed under "Products" at **www.archrecord.com** to locate the section most appropriate for your product. Our panel will view each product category as a group, so please include an image of each submission in a slide, transparency, glossy color photo, or color printout of a digital image. If you send a CD, you must provide a labeled color printout of each image that is on the disk. Please make sure the digital image is a high resolution TIFF (300 DPI, at least 4 x 5 inches). If you have a labeled sample of your product (no larger than 8 x 10 inches), please include it with your submission. E-mailed submissions will not be accepted.

Send the submission form (following page), image, sample, and descriptive material to:

Rita Catinella Orrell
ARCHITECTURAL RECORD
PRODUCT REPORTS 2005
Two Penn Plaza, 9th Floor
New York, NY 10121

If you have any questions, send a note to the Products Editor, Rita Catinella Orrell, at rita_catinella@mcgraw-hill.com.

DEADLINE: SEPTEMBER 2, 2005

ARCHITECTURAL RECORD PRODUCT REPORTS 2005

SUBMISSION FORM

1. **Product category and section:** _____

(See "Products" at www.archrecord.com for possible listings. For multiple submissions, please photocopy form. Submissions are limited to three per main category—furnishings, lighting, etc. Do not tape slides to form. Only send products introduced after September 2004. Do not send a CD without including a color printout.)

2. **Indicate type of image included with this form:**

❑ Slide/transparency ❑ Glossy color photo ❑ Color printout (with high res image on CD)

(Photography returned only upon request.)

3. ❑ **A 50- to 60-word description of the building product, or a press release, catalog page, or insert that gives pertinent architectural and performance information is included.**

4. ❑ **A labeled sample no larger than 8 x 10 inches is included (optional).**

5. **Please fill in completely:**

Name of new product: _____

Manufacturer's name *(as it should appear in print)*: _____

Manufacturer's mailing address: _____

Web site: _____

Phone number for reader inquiries: _____

Name of person who will respond to inquiries: _____

Name, title, and phone of person submitting this form *(for possible editorial follow-up)*: _____

6. **Send this form, product photography, and descriptive material to:**

Rita Catinella Orrell
ARCHITECTURAL RECORD
PRODUCT REPORTS 2005
Two Penn Plaza, 9th Floor
New York, NY 10121

DEADLINE: SEPTEMBER 2, 2005



Technology that's as powerful as your ideas.

BlackBerry 7250™ – with the most powerful processor yet.

- Access a variety of project management applications from ATSG, JumpStart Wireless™ and Corrigo™ wireless solutions
- Access office e-mail, scheduling tools and new HTML web browser in real time – from just about anywhere within the National Enhanced Services Coverage Area
- Talk to associates with available Bluetooth® wireless headset technology
- Manage larger files and e-mail attachments with expanded memory

BlackBerry 7250™ | Only $199.99 after $100 Advanced Device Credit when activating selected combinations of 2-year voice plans & data features.

Valuable corporate discounts available.

Visit a Verizon Wireless store or Circuit City, or go to verizonwireless.com

1.800.VZW 4 BIZ

1.800.899.4249

verizonwireless

We never stop working for you.

*Our Surcharges (incl. 2.18% Federal Universal Service (varies quarterly), 5¢ Regulatory/line/mo. & others by area) are not taxes (details: 1-888-684-1888); gov't taxes & our surcharges could add 6%–27% to your bill. Activation fee per line: $35/1yr; $20/2yrs.

Important Consumer Information: Subject to Customer Agreement, Calling Plan, terms and conditions of BlackBerry® product brochure and credit approval. $175 termination fee per line, other charges & restrictions. Cannot combine with other offers. Coverage & offers not available in all areas. Must be within National Enhanced Services Coverage Area to send/receive e-mail. Details/maps at verizonwireless.com. Individuals with Desktop Redirector must have desktop PC on and in a condition to receive e-mail. Voice calls cannot be received when an e-mail or other data transmission is occurring. The BlackBerry and RIM families of related marks, images and symbols are the exclusive properties of and trademarks or registered trademarks of Research In Motion Limited – used by permission. **Phone Offer:** In CA: Sales tax based on full retail price of phone. While supplies last. Limited time offer. ©2005 Verizon Wireless

CIRCLE 96 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

ENR 2005 TOP FIRM LEADERS FORUM

FALL SESSION

REGISTER TODAY!

Constructing in the 21st Century: New Ways to Think, New Ways to Build

September 28-29, 2005
Millennium Biltmore Hotel
Los Angeles

KEYNOTE SPEAKERS:



Timothy J. Leiweke,
President & CEO
Anschutz Entertainment Group



Major General Charles E. Williams,
Director, Overseas Building Operations
U.S. State Department



Association Partner
AIA

Partners:
Autodesk
AON Construction Services Group

Sponsors:
BENTLEY
CMC
Constructware 10 YEAR ANNIVERSARY

The industry's leading contractors, engineers, architects, equipment and building product manufacturers, and building and facility owners will gather to discuss trends, innovations and business issues. The Forum's interactive panel discussions include:

- Can the Leaders of an Industry Change the Way Their Business Works?
- Building Information Modeling: Owners, Architects, Engineers and Contractors Confront the Future, Today
- The Future Workforce: What Are They Learning? What Should They Be Learning?
- LEED: Green and Environmentally Sensitive and ... Worth It?

For a complete list of panelists or to register, visit the Forum website. **www.construction.com/event/**
Call: 212-904-4634 or E-mail: chuck_pinyan@mcgraw-hill.com

Confirmed Panelists include:
Gerry Salontai, CEO, Kleinfelder
Dennis Shelden, CIO, Gehry Technologies
Ron Austin, Senior Project Manager, Miami Performing Arts Center
Jeffrey S. Russell, Chair, Civil and Environmental Engineering, University of Wisconsin-Madison
David Meckel, AIA, Special Assistant to the President, California College of the Arts
Barbara Jackson, Construction Management Department, College of Architecture and Environmental Design, California Polytechnic State University
Rod Wille, Senior Vice President, Manager of Sustainable Construction, Turner Construction Co.
Ray Landy, President, DMJM H&N
Mona Field, Member, Board of Trustees, L.A. Community College District

McGraw Hill CONSTRUCTION ENR

6/05

The McGraw-Hill Companies

Dates & Events

New & Upcoming Exhibitions

Investigating Where We Live
National Building Museum
August 13–October 9, 2005
This exhibition showcases the results of the National Building Museum's five-week outreach program "Investigating Where We Live" (IWWL). The program teaches young people to use photography as a tool for exploring and documenting neighborhoods in Washington, D.C. Through this process, they gain an understanding of city planning, architecture, photography, and exhibition design. The neighborhoods explored this year are Anacostia, Navy Yard, and the New York Avenue corridor. At the National Building Museum. For further information, call 202/272-2448 or visit www.nbm.org.

Jean Prouvé: Three Nomadic Structures
West Hollywood
August 14, 2005–November 27, 2005
The first American presentation of the work of celebrated French designer and architect Jean Prouvé (1901–84), this exhibition includes furniture, vintage photography by Lucien Hervé, and architectural elements that address the most important aspects of Prouvé's practice: technological innovation, itinerant housing, the development of modular systems, and the use of aluminum. The exhibition installation, designed by Evan Douglis, is inspired by Jean Prouvé's commitment to exploring the most advanced technology of his time. At the Museum of Contemporary Art (MOCA) Pacific Design Center. Call 213/626-6222 or visit www.moca.org.

2005 Serpentine Gallery Pavilion Program
London
Summer 2005
Portuguese Pritzker-Prize-winning architect Alvaro Siza and his long-time collaborator the distinguished architect Eduardo Souto de Mouro will design the next Serpentine Gallery Pavilion. Since the commission was launched in 2000, it has resulted in four landmark temporary structures. At the Serpentine Gallery. For further information, call 020/7402-6075 or visit www.serpentinegallery.org.

Sheila C. Johnson Design Center at Parsons: A Celebration
New York City
September 14–November 8, 2005
This exhibition will celebrate the creation of a new campus center at Parsons, designed by Lyn Rice Architects, with drawings, models, and full-size mock-ups of construction details. In addition, Parsons will highlight current and recent work by Lyn Rice Architects, including the Dia:Beacon, and introduce the center's benefactor, the noted philanthropist Sheila C. Johnson. For more information, call 212/229-8919 or visit www.parsons.edu.



Raymond Loewy: Designs for a Consumer Culture



CIRCLE 97 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Cost estimating data you can count on!

The 2005 Sweet's Cost Guides



CALL 1-888-264-2665

Please specify priorty code 444T

McGraw-Hill CONSTRUCTION Sweets

BNi Building News

1612 S. Clementine, Anaheim, CA 92802

www.bnibooks.com

Dates & Events

Atlanta

September 15–December 23, 2005

A pioneer of industrial design, Loewy crafted a signature style by blending the traditional with European Modernism. The exhibition showcases the work of Loewy and his associates with an array of drawings, models, products, advertisements, photographs, archival documents, and rare footage of Loewy over five decades. It brings together the career of the prolific and influential figure who did much to define the culture of consumption. At the Museum of Design Atlanta. For information, call 404/688-2467 or visit www.museumofdesign.org.



Frank Lloyd Wright and Taliesen: The Photographs of Pedro Guerrero
Chicago

September 16–November 19, 2005

From 1939, when Taliesen set up its western front in Arizona, to the death of Wright in 1959, Guerrero created some of the greatest architectural photographs of the last century. The open access Wright granted the photographer ensured that the images became a true biography of the legendary architect. At Architech Gallery. For information, call 312/475-1290 or visit www.architechgallery.

Renewing Wright
Pittsburgh

October 1, 2005–January 15, 2006

This exhibition brings together two iconic buildings by Frank Lloyd Wright with, in each case, an associated project by a leading visionary architect of today. At the Heinz Architectural Center, Carnegie Museum of Art. Call 412/622-3131 or visit www.cmoa.org.

Prairie Skyscraper: Frank Lloyd Wright's Price Tower
Bartlesville, Okla.

October 14, 2005–January 15, 2006

An exhibition of approximately 108 drawings, models, photographs, documents, building components, and furnishings to mark the building's 50th anniversary. Visitors will be able to tour both the exhibition and the building's historic Frank Lloyd Wright interiors. At the Price Tower Arts Center. Call 918/336-4949 or visit www.pricetower.org.

In Pursuit of Pleasure: Schultze and Weaver and the American Hotel
Miami Beach, Fla.

November 13, 2005–May 28, 2006

Leonard Schultze and S. Fullerton Weaver were the preeminent architects/designers of American hotels in the 1920s and 1930s.This exhibition focuses on the firm's hotels, which include the Waldorf Astoria, Sherry-Netherland, Pierre, Breakers, Biltmore Chain, Nautilus, and Roney Plaza. At the Wolfsonian-FIU Museum, which owns the entire Schultze and Weaver archive. Visit www.wolfsonian.org.

The Design Workshop: Seven Years of Design Build at Parsons
New York City

November 17–December 19, 2005

This exhibition showcases seven years of The Design Workshop, an annual program in which graduate architecture students at Parsons collaborate with nonprofit organizations in New York City to design and build a project over a period of eight months. At Parsons, The New School for Design. For information, call 212/229-8919 or visit www.parsons.edu.

Anarchy to Affluence: Design in New York, 1974–1984
New York City

January 10–April 2, 2006

This exhibition examines the important interiors, furniture, graphics, fashion, and illustration produced in New York between 1974 and 1984, a period in which downtown New York artists, musicians, playwrights, and designers created some of the most avant-garde work produced in America during the last century. In conjunction with New York University's Grey Art Gallery exhibition, *The Downtown Show: The New York Art Scene 1974–1984*. At Parsons, The New School for Design. Call 212/229-8919 or visit www.parsons.edu.

Ongoing Exhibitions

Mies
Miami

July 11–September 30, 2005

A photo exhibition by photographer Paul Clemence celebrating the work of Mies van der Rohe. The photographs zero in on the architectural details of some of Mies's masterpieces, like the Farnsworth House, Crown Hall, and the

German Pavilion at Barcelona. At the Florida International University School of Architecture. Call 305/348-3181 or visit www.fiu.edu.

Vanishing Point
Columbus, Ohio
Through August 14, 2005
This exhibition features photographs, paintings, drawings, video, and mixed-media installations that explore the aesthetics of contemporary urban "nonspaces." These ubiquitous public realms—convenience stores, hotel lobbies, shopping malls, airport terminals, parking lots—are often considered anonymous, banal, or otherwise socially and culturally insignificant. Rather than objectively documenting these spaces, the artists in *Vanishing Point* interpret them by focusing on their experiential and atmospheric qualities. At the Belmont Building, Wexner Center for the Arts. Call 614/292-0330 or visit www.wexarts.org.

2005 Young Architects Program Proposals
New York City
Through August 22, 2005
An installation of the proposed designs by the five 2005 Young Architects Program finalists: the winner, Xefirotarch (Los Angeles), and finalists Aranda/Lasch (New York), Forsythe + MacAllen Design (Vancouver, B.C.), Graftworks (New York), and WW (Boston). In the Louise Reinhardt Smith Gallery at the Museum of Modern Art. Call 212/708-9400 or visit www.moma.org.



Designed for Living: The Modern Interior
Chicago
Through August 27, 2005
The concept of modernity used as a marketing device began in the early 20th century. Design drawings by G.M. Niedecken and two Modern masters, Alfonso Iannelli and Henry P. Glass, are featured in this exhibition. At the Architech Gallery of Architectural Art. Call 312/475-1290 or visit www.architechgallery.com.

Claesson Koivisto Rune—The Models
Stockholm
Through September 4, 2005
An internationally recognized design and architecture practice, Claesson Koivisto Rune was formed in 1995. A large number of models, representing 85 different projects ranging from rough mock-ups to presentation models and finished prototypes, will be on view. At the Arkitekturmuseet. Call 46(0)8/587-27000 or visit www.arkitekturmuseet.se.

Scents of Purpose: Artists Interpret the Spice Box
San Francisco
Through September 5, 2005
More than 80 leading local and national artists and architects were invited to creatively explore the meaning and form of the traditional Jewish spice box (or *besamin*) used in the Sabbath prayer service. Participants in this art exhibition include renowned architects Daniel Libeskind, Chong Partners Architecture in association with Berkeley Mills & Earth Resources, Robert A.M. Stern, C. David Robinson, and Brad Cloepfil of Allied Works Architecture. At the Contemporary Jewish Museum. Call 415/334-8800 or visit www.cjm.org.

The Arts and Crafts Movement in Europe and America, 1880–1920: Design for the Modern World
Milwaukee
Through September 5, 2005
The exhibition showcases more than 300 Arts and Crafts objects from the United States and throughout Europe—including furniture, ceramics, metalwork, textiles, and works on paper—borrowed from 75 institutions and private collections. At the Milwaukee Art Museum. Call 414/224-3200 or visit www.mam.org.

Design for Darkness: Design for the Visually Impaired
New York City
Through September 9, 2005
The project invited students of design throughout the Czech Republic and Slovakia to address the basic needs of the visually impaired and to develop new models or adapted objects for their daily life. On view at the Czech Center. Call 212/288-0830 or visit www.czechcenter.com.

Policy and Design for Housing Beyond the Minimum: Lessons of the Urban Development Corporation 1968–1975
New York City
Through September 10, 2005
In response to the lack of housing units being built for families with limited income, a concerned group of architects, planners, policy

get
I ~~need~~
cabinetry specs to create great designs.
at
kraftmaidspec.com



Only KraftMaidspec.com lets you download AutoCAD drawings of every single cabinet and gives detailed information on door styles, finishes, storage solutions and our quality construction. Visit KraftMaidspec.com and see why so many architects rely on it as their design resource.

Made just for you.
KraftMaid Cabinetry

www.kraftmaidspec.com

CIRCLE 98 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 99 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

makers, public advocates, and environmental psychologists will take a look at the situation by presenting an evaluation of the housing produced by the New York State Urban Development Corporation. The exhibition will use plans and photographs of a sample of projects around New York State that demonstrate housing of differing conditions: urban and suburban; mixed income; high-rise and low-rise; various densities; and various building materials and technologies. At the Center for Architecture. Visit www.udchousing.org or www.aiany.org.

The Architect Jean Nouvel Meets Louisiana
Humblebaek, Denmark
Through September 18, 2005
Jean Nouvel is one of the most famous members of the generation that has been called the New Wave of French architects, all of whom participated in "Les Grands Projets" in Paris during the Mitterrand era. Jean Nouvel's self-curated exhibition aims to demonstrate his fundamental architectural principle—the strong dialogue with the spirit and specific character of a place that forms the point of departure for every Nouvel project. At the Museum of Modern Art. Call 45/4919-0719 or visit www.louisiana.dk.



Filigree Spaces:
Textile Installations by Piper Shepard
Baltimore
Through September 18, 2005
The two new installations, featuring a dramatic curtain wall in the Baltimore Museum of Art's lobby and a "room within a room" design in the museum's textile gallery, explore the connection between textiles and architecture. At the Baltimore Museum of Art. Call 410/396-7100 or visit www.artbma.org.

Romantic Modernist: The Life and Work of Norman Jaffe, Architect
Southampton, N.Y.
Through September 18, 2005
Norman Jaffe built over 600 projects during his 35-year career. He received numerable architecture awards and also participated in national and international exhibitions at leading institutions, including the Museum of Modern Art, New York. Eastern Long Island is where Jaffe found his place in American architecture, creating unique vacation homes while exploring his love of light and form. This is the first major exhibition to examine the life and work of this important American architect. At the Parrish Art Museum. Call 631/283-2118 or visit www.parrishart.org.

Restoration: The Dissolution of Ideologies
Stockholm
Through September 25, 2005
Restoration doctrines have succeeded one another ever since the start of the 19th century. In recent years, one finds a tendency to fit the approach to the object of restoration rather than following a specific doctrine. If there is an ideology of restoration today, what does it look like? This exhibition presents 10 important restorations completed recently. At the Arkitekturmuseet. Call 46(0)8/587-27000 or visit www.arkitekturmuseet.se.

a_show Stage 2: Austrian Architecture in the 20th and 21st Centuries
Vienna
Through September 2005
Due to the sheer scope of material covered by the exhibition, *a_show* is being subdivided into 10 themes to be opened successively in three stages. The first stage, covering the period 1850–1918, opened in March 2004 with much success. *Stage 2* extends to the period from 1919–58. At the Architekturzentrum Wien. Call 431/522-3115 or visit www.azw.at.

2005 Young Architects Program
Long Island City, Queens
Through September 2005
Los Angeles–based architecture firm Xefirotarch has been selected as the winner of the sixth annual MoMA/P.S. 1 Young Architects Program, a competition that invites emerging architects to propose a building project for the courtyard of P.S. 1 in Long Island City, Queens. Call 212/708-9400 or visit www.moma.org.

On Tour with Renzo Piano & Building Workshop: Selected Projects
Los Angeles
Through October 2. 2005
Featuring several seminal works, this exhibition shows an intimate view of the work of one of the most respected and visionary architects of our time. Piano's involvement in each stage of a

building's development-from concept and master plan to construction and detailing-is chronicled. In the Ahmanson Building at the Los Angeles County Museum of Art (LACMA). Call 323/857-6000 or visit www.lacma.org.

Zero Gravity: The Art Institute, Renzo Piano, and Building for a New Century
Chicago
Through October 2, 2005
This exhibition presents delicate models, detailed renderings, and calligraphic sketches of the new north wing at the Art Institute of Chicago created by the architects of the Renzo Piano Building Workshop. In echoing Renzo Piano's commitment to the generous use of natural light in galleries, as well as to light architectural interventions in urban settings, the show is conceived to emphasize the lightness of the new north wing's design, with materials on display illuminated from a skylight. At the Art Institute of Chicago, in the airy, evocative setting around the balcony in Gallery 200. Call 312/443-3600 or visit www.artic.edu.

Transformed: Uncommon Uses of Materials in Contemporary Design
Philadelphia
Through October 9, 2005
With a focus on both form and function, this exhibition comprises 19 contemporary design objects in the Philadelphia Museum of Art's collection, providing an illuminating look at what happens when today's designers fuse utilitarian objects with unconventional materials, such as silicon, recycled plastic, fibrated concrete, and even goose feathers. The exhibition includes pieces by Ingo Maurer, Frank O. Gehry, Tokujin Yoshioka, and Fernando and Humberto Campana, among others. At the Philadelphia Museum of Art. Call 215/763-8100 or visit www.philamuseum.org.

Tools of the Imagination
Washington, D.C.
Through October 10, 2005
This exhibition will show how various devices have revolutionized the way in which architects and designers imagine and create architecture. Included are 250 years of design tools and technologies—from historic pencils, ink, and drafting equipment to the latest and most sophisticated software and hardware, simulations, models, and lasers—as well as a wide array of drawings, renderings, and sketches from well-known architects. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Going, Going, Gone? Mid-Century Modern Architecture in South Florida
Fort Lauderdale, Fla.
Through October 30, 2005
Can we still save South Florida's Midcentury Modern architecture? This exhibition is a photographic journey through Broward and Miami-Dade counties featuring the work of photographer Robin Hill, who has shot dozens of outstanding South Florida structures dating back to the mid-20th century. At the Museum of Art. Call 954/525-5500 or visit www.moafl.org.

The High Line
New York City
Through October 31, 2005
This exhibition features Field Operations and Diller Scofidio + Renfro's winning entry for the redesign of the High Line, a defunct, elevated railway bed that runs along Manhattan's far West Side. In the Architecture and Design Gallery at the Museum of Modern Art (MoMA). Call 212/708-9400 or visit www.moma.org.

Lectures, Conferences, and Symposia

Lecture: East End Dream House
Southampton, N.Y.
August 5, 2005
This talk with Alicia Longwell, Lewis B. and Dorothy Cullman chief curator, art and education, at the Parish Museum, will trace the history of domestic architecture in the Hamptons, focusing on the rise of the Hamptons beach house in the postwar period and the social and cultural trends that shaped this phenomenon. At the Parrish Museum. Call 631/283-2118 or visit www.parrishart.org.

Reel Architecture Film Series
Washington, D.C.
Wednesdays through August 24, 2005
These screenings showcase American films that reflect themes related to the National Building Museum's 25 years of exhibitions. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

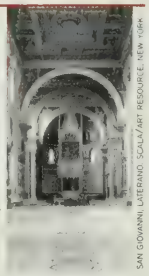
A Touch of Cass: Ramsey Hill Historic House Tour
Saint Paul, Minn.
September 11, 2005
The 2005 tour will focus on homes designed by



CIRCLE 100 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

NATIONAL BUILDING MUSEUM
AT NBM

lectures


SAN GIOVANNI LATERANO, SCALA/ART RESOURCE, NEW YORK

August 9
The Majesty of Capitol Hill
Thomas B. Grooms, Design Excellence Program, General Services Administration

August 15
Bernini and Borromini, A Rivalry that Transformed Rome
Jake Morissey, author

exhibitions


FLAG-RAISING CEREMONY, JAISOW COLLECTIONS

Investigating Where We Live
through October 9, 2006

Tools of the Imagination
through October 10, 2005

Jewish Washington: Scrapbook of an American Community
through January 8, 2006

Liquid Stone: New Architecture in Concrete
through January 29, 2006

Washington: Symbol & City
long-term exhibition

national building museum

401 F Street NW
Washington, DC 20001
202.272.2448
www.NBM.org

For more information and to register for programs, call or visit our website. Discounts for members and students.

Dates & Events

renowned architect Cass Gilbert, in honor of the centennial celebration of Gilbert's most famous Minnesota masterpiece—the State Capitol Building. For information, call 651/228-9111 or visit www.ramseyhill.org.

GlassBuild America
Atlanta
September 13–15, 2005
The Glass, Window, and Door Expo will be held at the Georgia World Congress Center. For further information, visit www.glassbuild.com

Prague: 20th-Century Architecture in Transition
Prague
September 17–23, 2005
The AIA Committee of Design conference will explore design of buildings, sites, and the city in relation to political, social, cultural, and economic transitions and the permanence of the historic, climatic, and geographic environment. At the Hotel Alcron. Visit www.aia.org.

2005 AIA New York Chapter Design Awards Public Symposium
New York City
September 19, 2005
A moderated discussion and presentation of outstanding architecture, interior architecture, and unbuilt projects located in New York City or designed by New York architects. At the Center for Architecture. Call 212/358-6117 or visit www.aiany.org.

Internship Conference: Designing Tomorrow's Architect
San Antonio
September 22–24, 2005
Seventy-five invited participants will include key leadership from each organization and a diverse group of stakeholders in the internship process. Cosponsored by the AIA and NCARB, the conference will be held at the historic Empire Theatre. For more information, visit www.designingtomorrowsarchitect.org.

100% Design
London
September 22–25, 2005
The internationally renowned commercial contemporary design exhibition promises an exciting lineup of established manufacturers and designers as well as first time exhibitors and upcoming design talent. At Earls Court 2. For information, visit www.100percentdesign.co.uk.

Design for Change: A Symposium on Design, Social Responsibility, and Nonprofit Organizations
New York City
September 23, 2005
This symposium will bring together design educators and practitioners and nonprofit administrators to discuss the role of design in addressing larger social issues. The day-long program will include panel discussions, presentations of case studies, and opportunities for informal dialogue. At Parsons The New School for Design. Call 212/229-8919 or visit www.parsons.edu.

ArtHouses: New Directions in Museum and Exhibition Design
Houston
September 28–October 26, 2005
A lecture series presented by the Rice Design Alliance. A new generation of architects has emerged to imaginatively address the challenges of designing for art of our time. Lecturers include Brad Cloepfil of Allied Works Architecture, Tony Fretton of Tony Fretton Architects, Galia Solomonoff of OpenOffice: art + architecture collaboration, and David Adjaye of Adjaye/Associates. In Brown Auditorium at the Museum of Fine Arts. Call 713/348-4876 or visit www.rda.rice.edu.

Architecture River Tours
Chicago
Through October 2, 2005
See more than 50 historic and architecturally significant buildings with trained volunteer docents who are Chicago architecture enthusiasts. For tour information, call 312/922-3432 or visit www.architecture.org.

Conrad Buff III and Donald Hensman Home Tour
Pasadena, Calif.
October 11, 14, and 15, 2005
"A Celebration of the Work of Architects Conrad Buff III and Donald Hensman" is a three-day event featuring a home tour, symposium, and reception. Buff and Hensman helped define the ultra cool and casual California Modern architecture scene of the 1950 and '60s. The tour will consist of six Buff and Hensman homes in the Pasadena, Altadena, and Linda Vista areas, some of which have been unavailable to the public until now. For information, call 626/793-3334.

Competitions

Juried Photo Exhibits at Build Boston
Deadline: August 1, 2005
All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. Visit www.architects.org/awards.

Honor Awards for Design Excellence
Deadline: August 4, 2005
Any built project of any type anywhere in the world by any Massachusetts architect is eligible, and any architect anywhere in the world may submit any project built in Massachusetts. Visit www.architects.org/awards.

Boston Foundation for Architecture: Grants for Public Education Programs
Deadline: August 10, 2005
An invitation to educators, community groups, and creative individuals to submit grant proposals for public-education programs in Massachusetts related to planning, design, and the built environment. For more information call 617/951-1433 or visit www.bfagrants.org.

The 22nd Antron Fiber Design Award
Deadline: September 16, 2005
This award program recognizes designers who are setting new standards in commercial design through the innovative use of carpet. Visit www.antron.invista.com/designawards.

Windscape: An Ideas Competition Envisioning Renewable Energy for Cape Cod
Deadline: September 30, 2005
The competition challenges participants to explore the notion of renewable energy and to better understand the environmental, visual, and other implications of the infrastructure of a wind farm. For further information, visit www.architects.org/windscape.

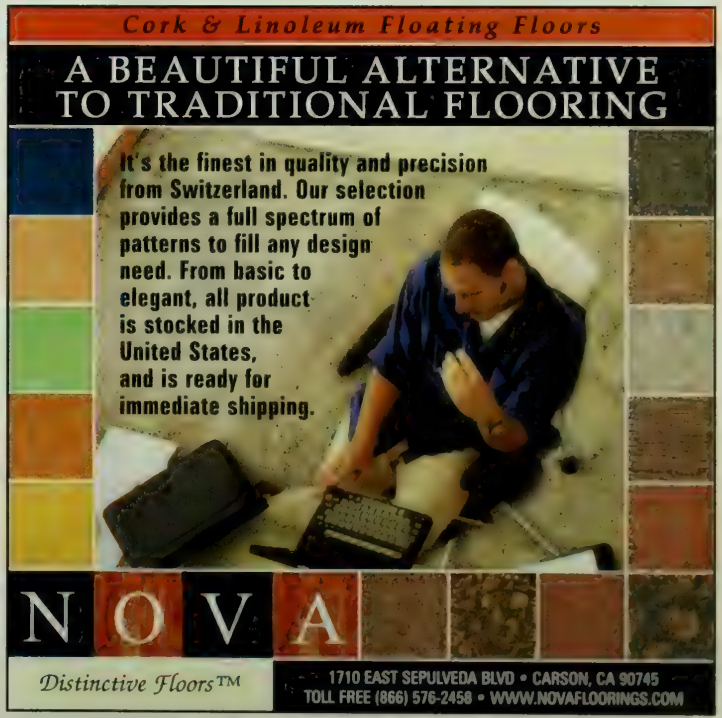
2005 NSA Sunroom Design Awards Competition
Deadline: October 31, 2005
Judged in three cost levels as well as type of roof category, the National Sunroom Association (NSA) Design Awards Competition recognizes excellence in design and installation of sunrooms. For more information, visit www.nationalsunroom.org.

2005 Source Awards
Deadline: December 2, 2005
This national lighting design competition, which focuses on furthering the understanding and function of lighting as a primary element in design, is open to all lighting designers, architects, engineers, interior and professional designers, and consultants who use Cooper Lighting fixtures in interior or exterior design projects. Visit www.cooperlighting.com.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com. Edited by Alexandra Gates.



CIRCLE 101 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



CIRCLE 102 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

Program title: **"A New Era for Fire Protection and Life Safety," Architectural Record (08/05, page 139).** 085EDIT8

AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through August 2007.)

Directions: Select one answer for each question in the exam and completely circle appropriate letter. A minimum score of 70% is required to earn credit. Take this test online at http://archrecord.construction.com/continuinged/default.asp

1.	a	b	c	d	**6.**	a	b	c	d
2.	a	b	c	d	**7.**	a	b	c	d
3.	a	b	c	d	**8.**	a	b	c	d
4.	a	b	c	d	**9.**	a	b	c	d
5.	a	b	c	d	**10.**	a	b	c	d

Last Name **First Name** **Middle Initial or Name**

Firm Name

Address **City** **State** **Zip**

Tel. **Fax** **E-mail**

AIA ID Number **Completion date (M/D/Y):**

Check one: ❑ $10 Payment enclosed. (Make check payable to *Architectural Record* and mail to: Architectural Record/Continuing Education Certificate, PO Box 682, Hightstown, NJ 08520-0682.) For customer service, call 877/876-8093.

Charge my: ❑ Visa ❑ Mastercard ❑ American Express **Card#**

Signature **Exp. Date**

Check below:

❑ **To register for AIA/CES credits:** Answer the test questions and send the completed form with questions answered to above address, or fax to 609/426-5592.

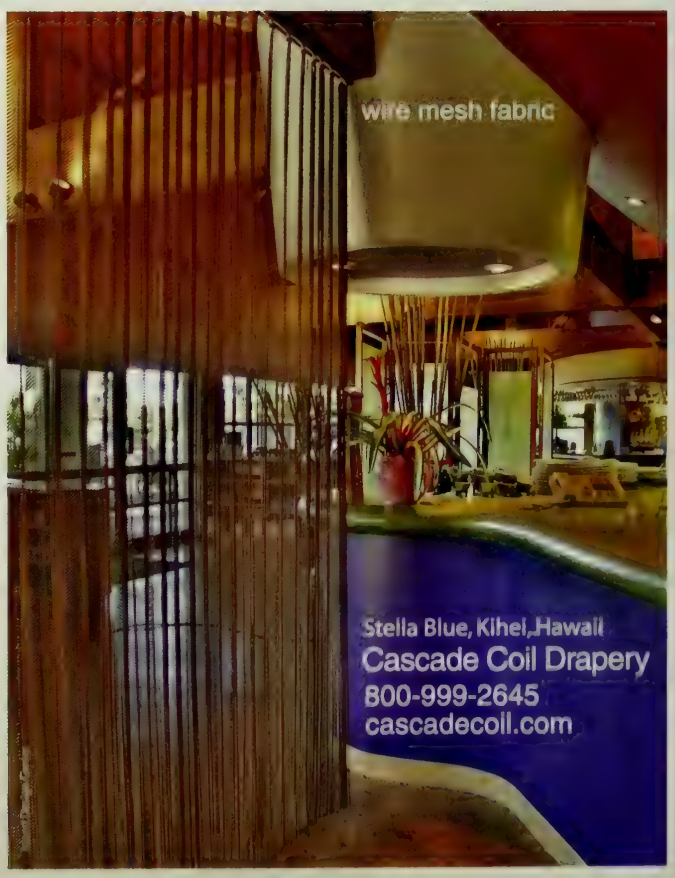
❑ **For certificate of completion:** As required by certain states, answer test questions, fill out form above, and mail to above address, or fax to 609/426-5592. Your test will be scored. Those who pass with a score of 70% or higher will receive a certificate of completion.

Material resources used: Article: This article addresses issues concerning health and safety.

I hereby certify that the above information is true and accurate to the best of my knowledge and that I have complied with the AIA Continuing Education Guidelines for the reported period.

Signature **Date**





CIRCLE 103 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

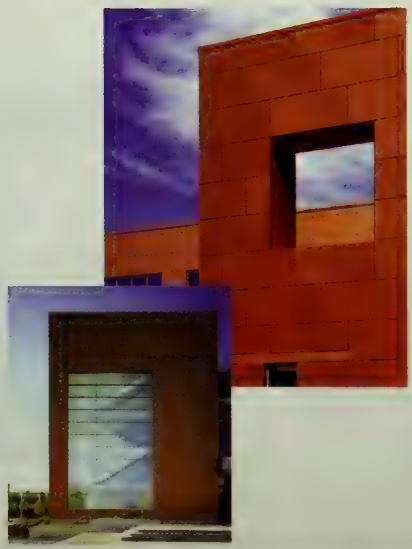
Trespa Meteon®: The Head of Its Class.



Project Architect: Legat Architects,
Construction Manager: Gilbane Building Company
© Paul Rivera/archphoto 2004

Erik Andersen, Architect
HOK Chicago
"Meteon is everything an architect wants—environmentally friendly, durable, economical and aesthetically expressive with a wide selection."

David Buckley, Specifier
HOK St. Louis
"Trespa Meteon is a really attractive solution that meets sustainability criteria that many projects require."



Trespa Meteon® is an especially appropriate building material for learning facilities because years of research, expertise and knowledge went into its development. The result is a truly state-of-the-art exterior facade. Meteon was specified to give William Rainey Harper College in Palatine, IL a "high-design" look that's weather resistant, colorfast, impact resistant and easy to clean—even with organic cleaners and detergents. Meteon is also ideal for fascias, sandwich panels, storefronts, soffits, balconies and balustrades and is available in a wide range of colors, textures and patterns.

Make the educated choice. Choose Trespa Meteon.
Call 800-4-TRESPA today for more information.

www.Trespa.com

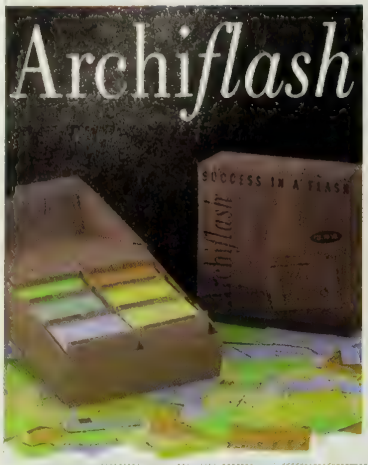
®TRESPA

All the best qualities in one panel

CIRCLE 104 ON READER SERVICE CARD OR GO
TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

Pass the ARE 3.0. Study With Archiflash®

1 General data



Nalsa

Get the NEW 2005 5th Edition. Celebrating Over 10 Years of Success. Prepare for the Architect Registration Exam with Archiflash. Each set contains 1,152 expertly written flashcards covering all six multiple choice tests: Pre-Design, General Structures, Lateral Forces, Mechanical & Electrical Systems, Building Design/Materials & Methods, and Construction Documents & Services. Learning is easy with timesaving charts, definitions, diagrams, and multiple choice Q&A. More information than you ever thought possible in an easy-to-use flashcard format. Only $99.95. Individual divisions available for $24.00 each.

800-411-7314
www.archiflash.com

Circle Reader Service #150

Crystallized Glass Ceramic Architectural Panels

4 Masonry



Technical Glass Products

Neopariés® and Neopariés® LT are lighter yet stronger than granite. Commonly used for cladding interior and exterior walls, flooring, and counter or tabletops, they are virtually impermeable and not subject to freeze-thaw damage, penetration by rust, mortar or other staining substances. Contact Technical Glass Products at 888-397-3473 or www.fireglass.com.

888-397-3473
www.fireglass.com

Circle Reader Service #153

Gate Operators

2 Site construction



FAAC International, Inc.

FAAC is the world's largest specialized manufacturer of automated operators for swing, slide, and barrier gate systems. FAAC hydraulic operators meet or exceed strict European safety requirements as well as UL325 and CSA standards in North America. FAAC received ISO-9001 certification in 1996. Swing gate operators for residential and commercial applications include on-gate and in-ground versions that are famous for being small, but powerful. Barrier gates versions include a high-speed model (.8 sec.) for freeway use and a special model designed for heavy traffic wide entrances that require long beams (up to 23-ft.).

800-221-8278
www.faacusa.com

Circle Reader Service #151

Pre-Engineered Railings

5 Metals



Handrail Design Inc.

inox™ Stainless Railing System: Manufactured of corrosion-resistant stainless steel, inox is ideal for interior or exterior applications in commercial and residential facilities. Infill materials are available in perforated stainless steel, tempered glass, and stainless steel rods. Handrails are available in wood/stainless, stainless, or colored nylon. Curved rails and custom designs are available. Complete supply and installation service are available throughout North America, which includes inox, CIRCUM™, HEWI® Nylon, and d line™ railings. Email info@hdirailings.com

717-285-4088
www.hdirailings.com

Circle Reader Service #154

Commercial Grade Outdoor Furniture

2 Site construction



Modern Outdoor

High style, clean-lined simplicity, short lead times, environmentally conscious materials—these are the attributes of Modern Outdoor—a producer of top quality outdoor furniture with a definitive modern aesthetic. The Modern Outdoor Collections are commercial grade products designed for the restaurant, hospitality, and resort industries, with an aesthetic that is perfect for a residential client's backyard setting. The entirety of the Collection is made from Ipe, Electropolished Stainless Steel and Natural Composite materials. Modern Outdoor offers attractive pricing.

818-838-7060
www.modernoutdoor.com

Circle Reader Service #152

Copper Finish

5 Metals



Linetec

Linetec offers a copper anodize finish that maintains its initial copper color and does not patina over time. Architects, owners, and residents no longer need to worry about the design complexities and maintenance issues when choosing the classic look of copper. Contact Linetec for more information or to request samples.

888-717-1472
www.lintec.com

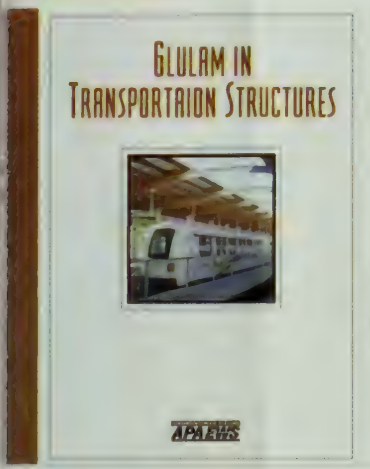
Circle Reader Service #155

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Versatile Wood Design

6 Wood & plastics



APA - The Engineered Wood Association

Around the world people are on the move, and the need for transportation infrastructure and facilities continues to grow. Architects challenged by these needs are turning to glued laminated timbers and other engineered wood products. This new publication from APA - The Engineered Wood Association, includes profiles of seven transit facilities with key comments from the designers, contractors and facility operators. The facilities range from a ferry terminal in Alaska to the new airport terminal in Victoria, B.C., and include train stations, bus terminals, and multi-modal facilities.

www.glulambeams.org

Circle Reader Service #156

Tall Wall Systems

6 Wood & plastics



Trus Joist, A Weyerhaeuser Business

Trus Joist's tall wall system offers architects, designers and builders, walls 10- to 30-ft. in height, allowing spacious, open floor plans. The design of a tall wall system using TimberStrand® LSL and Parallam® PSL technologies provides a wall that will start straight, stay straight and deliver predictable performance. Visit Trus Joist, A Weyerhaeuser Business at www.trusjoist.com or call 800-338-0515.

800-338-0515
www.trusjoist.com

Circle Reader Service #159

Architectural Columns, Balustrades & Mouldings

6 Wood & plastics



Melton Classics, Inc.

Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, mouldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers a maintenance-free balustrade product ideal for any application.

800-963-3060
www.meltonclassics.com

Circle Reader Service #157

Metal Wall Cladding

7 Thermal & moisture protection



ATAS International, Inc.

ATAS International Inc. introduces the INSPIRE Wall System, a new metal wall cladding made from .032 aluminum with tiny perforations in a heat absorbing surface. The premium finish is available in sixteen standard colors. Mounted a few inches from the main wall, on preferably a southern exposure, fresh air is drawn through the perforations and directed into the building with a fan and duct system. Air space between the walls also acts as an insulator. INSPIRE Wall is environmentally friendly, because it uses clean, natural energy.

800-468-1441
www.atas.com

Circle Reader Service #160

Colorful Laminates

6 Wood & plastics



Nevamar Company, LLC

Introducing a colorful new palette filled with the latest laminates from Nevamar. Six exotic woodgrains complete one of the most unusual and exciting collections, while six expressive patterns will jumpstart dozens of innovative design ideas. Of course, they're all protected by their exclusive Armored Protection™ Surface for long, beautiful life. Visit www.nevamar.com or call 800-638-4380.

800-638-4380
www.nevamar.com

Circle Reader Service #158

Crimp-Curved Roof, Wall & Decking Panels

7 Thermal & moisture protection



Curveline

Curveline can crimp-curve metal panels in a range of profiles, substrates and finishes for structural or decorative use. Applications: roofs, walls, standard and acoustical decking, canopies, fascias, mansards, etc. Specifiers may source panels from manufacturers in 100+ factory locations and select the desired curving parameters, including simple, complex and multi-radius curves.

www.met-tile.com/curveline

Circle Reader Service #161

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

Metal Building Components

7 Thermal & moisture protection





Metal Sales Manufacturing Corporation

With 19 branches throughout the United States, Metal Sales Manufacturing Corporation is one of the building industry's premier providers of metal building components. They produce metal roofing, siding panels, and accessories for agricultural, commercial, architectural, industrial, and residential building projects of every shape and size—new construction or retro-fit. Metal Sales has a 40-year history of providing cutting-edge products, impeccable service from highly trained professionals, and the largest sales force in the industry.

800-406-7387
www.metalsales.us.com

Circle Reader Service #162

Architectural Glass

8 Doors & windows



General Glass International

Bubbles is one of the new and exciting patterns from General Glass. Produced in 1/4-in. and 3/8-in. thicknesses, it is ideal for shower doors, partitions and other architectural applications. Bubbles is easily fabricated to meet your project needs. General Glass International offers a wide selectionof pattern glass available from their extensive inventory. They offer domestic and imported patterns that range from traditional to contemporary. Their extensive selection includes many heavy patterns in 3/8-in. thickness as well as unique acid etched designs. These products are available locally from select fabricators nationwide.

800-431-2042
www.generalglass.com

Circle Reader Service #165

Roof Penetration Flashings

7 Thermal & moisture protection



SBC Industries

SBC Industries has a complete line of easy-to-install roof penetration flashings that replace pitch pans known to require maintenance and commonly cause roof failure. They are approved and endorsed for use in warranted roofs by many system manufacturers. These stainless steel flashings, compatible with most materials, are the answer to problems with flashing of angle irons, I and H beams, pipes, square tubing, channels, conduits, coaxial and lightning cables, and struts. In a split or a slipover design. Shown is the VTR with Vandal proof cap and Lightning Cable Flashing.

800-228-2580
www.sbcflashings.com

Circle Reader Service #163

Special Purpose Doors & Windows

8 Doors & windows



Krieger Specialty Products Co.

For over 60 years, Krieger has been custom manufacturing acoustical, blast, bullet, security, radio frequency shielding, thermal shielding, stainless steel, and other special purpose doors and windows. Their custom designed and manufactured doors and windows are utilized by leading architects in premier installations such as the Kodak Theater, Disney Concert Hall, Hollywood Bowl, Max Fisher Performing Center, Boeing Integration Center, The Getty Museum, L.A. Zoo, Basketball Hall of Fame, the Pentagon, and various other U.S. government, military, and embassy buildings throughout the world.

www.KriegerProducts.com

Circle Reader Service #166

Extreme Performance Commercial Insulated Glass

8 Doors & windows



AZON USA Inc.

Warm-Light® spacer from Azon creates a warm-edge glass unit that reduces thermal conductivity in any climatic condition. The result is a dramatic reduction in condensation on the glass surface in cool climates and less heat transfer in warm climates, as well as lower utility costs and a more comfortable interior environment. The polyurethane core in Warm-Light spacer is 100 times less conductive than stainless steel or conventional aluminum spacer. Also enables design flexibility for a variety of building types, window sizes and styles, with standard and custom colors.

800-788-5942
www.warmedge.com

Circle Reader Service #164

Window Covering Treatments

8 Doors & windows



MechoShade Systems, Inc.

With over 30 years experience, MechoShade® is one of the leading single-source manufacturers of complete integrated solar shading systems, controls and daylighting solutions. They offer a wide variety of control solutions for commercial and residential applications. From simple line voltage switches to networked, addressable, building-wide controls, MechoShade offers a variety of solutions including integration into 3rd party Lighting, BMS and A/V Systems. With over 100 visually transparent shade cloths in various weaves, densities and colors, they can meet any performance or design requirement.

718-729-2020
www.mechoshade.com

Circle Reader Service #167

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Visual Effects Glass

8 Doors & windows



Oldcastle Glass®

Montage™ Visual Effects Glass by Oldcastle Glass® is a totally new concept in glazing. Montage™ provides architects and designers the ability to create unique custom effects by combining a wide variety of standard designs and technologies. Montage™ allows you to mix and match textured patterned glass, custom colored coatings, designer silk-screened patterns, even unique rice paper designs into your very own vision.

866-653-2278
www.oldcastleglass.com

Circle Reader Service #168

Edge Seals for Category B Fire Doors

8 Doors & windows



Zero International, Inc.

Zero International's #188S compression seal and #8144S gasket are UL-approved for use as Category G edge sealing systems and as Category H smoke and draft control gasketing for 20-min. Category B fire doors. These silicone systems are surface-applied with pressure-sensitive adhesive and eliminate the need for intumescence in the door assembly. Category G and Category H are testing-agency classifications used to standardize the testing and labeling of doors and gasketing under positive-pressure code requirements for fire-rating and smoke control, respectively.

www.zerointernational.com

Circle Reader Service #171

Electronically Tintable Glass

8 Doors & windows



SAGE Electrochromics, Inc.

In the making for over a decade; durable, tested glass that tints at the push of a button. SageGlass® electronically tintable glazing eliminates having to choose between a design that maximizes the positive attributes of the sun—daylight, view, connection to the outdoors—and one that attempts to minimize its drawbacks—heat gain, glare, and fading. You get unprecedented solar control without the need for blinds, so the view and your design intent are preserved.

877-724-3321
www.sage-ec.com

Circle Reader Service #169

Resilient Athletic Flooring

9 Finishes



Abacus Sports Installations

Abacus Sports Installations is proud to offer PADENPOR. PADENPOR resilient flooring is designed for multipurpose use, including all sports activities, dances, meetings, roller blading, etc. PADENPOR is a "dual durometer" multi-purpose floor. Two products (rubber base-mat and urethane) are combined to introduce two different hardnesses to the floor. The rubber underlayment (LEED and Green certified) is soft, offering resilience/ergonomics/safety. The urethanes are hard, offering not only performance (ball rebound/playability) but also durability.

800-821-4557
www.abacussports.com

Circle Reader Service #172

Wood Interior Windows & Doors

8 Doors & windows



Weather Shield Windows & Doors

Engineered with unique features and built for unparalleled performance, the Weather Shield Legacy Series is simply one of the best window and door lines available for custom and luxury homes. Available in tilt double-hung, casement, awning, and direct-set windows and French doors, the premium windows feature elegant wood interiors in a variety of wood species from Weather Shield's Custom Wood Interiors Collection™.

800-477-6808
www.weathershield.com

Circle Reader Service #170

Ornamental Plaster Ceiling Tiles

9 Finishes



Above View Mfg, By Tiles, Inc.

ABOVE VIEW ornamental plaster ceiling tiles are fabricated from a non-toxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1300 custom colors and faux finishes available upon request.

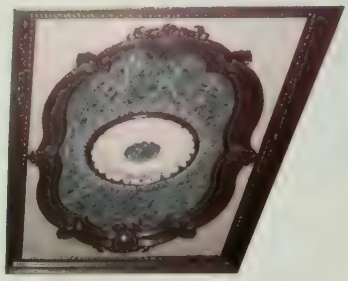
414-744-7118
www.aboveview.com

Circle Reader Service #173

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Ceiling Accent

9 Finishes



Architectural Products by Outwater, LLC

Architectural Products by Outwater offers Ceiling Focus, the most dramatic accent available for any large or high ceiling. Suited for residential and commercial use in new construction or renovation applications, Ceiling Focus can be used "right out of the box," or can be easily adapted for use with chandeliers or other lighting fixtures by merely drilling through its center. Produced of lightweight, extremely durable high-density polyurethane, Ceiling Focus comes factory primed, and is ready to be painted, glazed or faux finished the same day as installation. Ceiling Focus is available in two sizes.

800-835-4400
www.outwater.com

Circle Reader Service #174

Decorative Wall Panels

9 Finishes



Kemlite Company

frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture-resistant frp panel with a decorative finish that includes myriad colors, patterns, and woodgrains, as well as a tile-look panel. Available with over 500 hundred choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com

Circle Reader Service #177

Sustainable Ceiling Panels

9 Finishes



Chicago Metallic

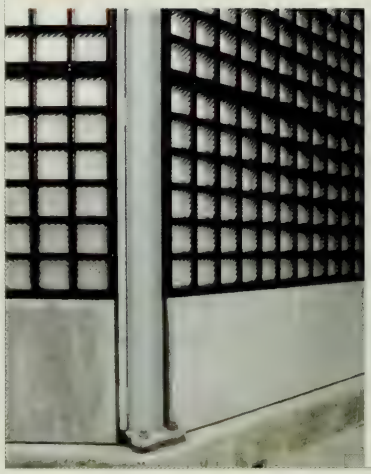
EuroStone™ sustainable ceiling panels deliver environmental performance, long-term value and classic styling. Made of lightweight, inorganic perlite which does not support mold growth. Class A fire rating. Exceptional acoustical performance and light reflectance. Ideal for schools, healthcare, offices and harsh, humid environments. Options: pattern selection, square and reveal edge.

800-323-7164
www.chicagometallic.com/eurostone

Circle Reader Service #175

Noise Barrier Systems

9 Finishes



Quilite® International

QUILITE® is designed to effectively reduce noise and maintain light transparency. Corrugated on both sides, their panels merge noise-cutting performance with light-transmitting aesthetics. Laboratory and field tests rate QUILITE®'s noise reduction 60-80% and light transmission 80%. Designed by aerospace engineers, QUILITE®'s technology is applicable to a variety of venues, large and small, public and private.

310-641-7701
www.quilite.com

Circle Reader Service #178

Cast Metal Wall Surfacing Material

9 Finishes



Gage

Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples.

www.gageverticalsurfacing.com

Circle Reader Service #176

Stackable Trim Molding System

9 Finishes



Roppe Corporation

Roppe BaseMates™ is a patent-pending stackable trim molding system made of a PVC free, 100% rubber compound. A new option in resilient custom molding finishes, BaseMates is available in four 1-1/8-in. shoe mold profiles and four 3/4-in. and seven 1-3/4-in. profile top trims. BaseMates can be used with any existing 1/8-in. or .080-in. wall base to create a distinctive look while extending the life of the base. BaseMates, manufactured with 10% natural rubber, can contribute to the LEED® Green Building Certification System.

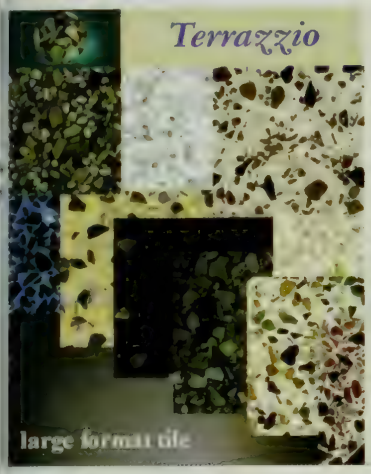
800-537-9527
www.roppe.com

Circle Reader Service #179

T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Authentic Terrazzo

9 Finishes



Surface Elements

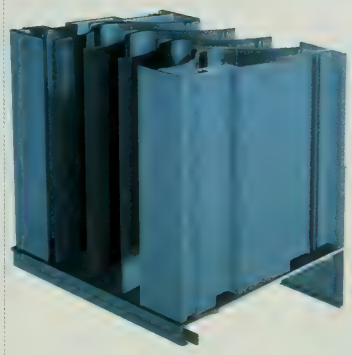
Terrazzio is an Authentic Terrazzo used for floors, counter tops and as an exterior wall panel. Terrazzio is first manufactured as a 4-ft. by 8-ft. by 1/4-in. bisque then polished and cut to your specifications. With twelve 'time tested' traditional colors, and twenty-two vibrant contemporary colors, Terrazzio has the beauty and durability of traditional terrazzo with today's warm tones and refreshing colors. Terrazzio is ideal for schools, dazzling 'up scale' restaurants and retail stores.

931-845-3434
www.Terrazzio.com

| Circle Reader Service #180

Vertical Blade Louver

10 Specialties



Airolite

The Airolite Company is expanding its Storm Class™ wind-driven rain louver line to include a new product with superior resistance to water penetration under wind-driven rain conditions. New AIROLITE Louver Type SCV4 is a 4-in.-deep, vertical, stationary blade louver rated under AMCA Standard 500-L 99, Wind Driven Rain Water Penetration Test, and expands Airolite's existing Storm Class™ product range which now includes 2-, 4-, 5-, 6-, 7- and 8-in.-deep louvers. For more than 85 years, Airolite has served as an innovative leader in the design and manufacture of architectural louvers, grilles, screens and sun controls.

740-373-7676
www.airolite.com

| Circle Reader Service #183

Reduce Impact Noise

9 Finishes



The Noble Company

NobleSeal® SIS is a sheet membrane that reduces the impact noise produced by hard surface flooring (like tile and hardwood floors). SIS is only 3/64-in.-thick so it minimizes problems with transitions and the need to alter door and cabinet heights. It is effective at reducing noise (IIC=62; STC=59). SIS can be installed over all common substrates, even gypsum concrete and radiant heating systems. SIS can also protect thin-set tile from cracking and provide waterproofing. Visit their Web site. Email richard@noblecompany.com

800-878-5788
www.noblecompany.com

| Circle Reader Service #181

Reinforced Welded Lockers

10 Specialties



Penco Products, Inc.

ProTough™ welded lockers from Penco are designed for superior durability. Each vertical and front to back junction of the locker is reinforced by 3/4-in. 18-ga. square steel tubing to provide extra protection, like the roll cage of a race car. ProTough lockers are ideal for athletic applications where a more robust construction may be needed to withstand vigorous use. Double pan doors and cremone handles are available.

800-562-1000
www.pencoproducts.com

| Circle Reader Service #184

Porcelain Floor Tiles

9 Finishes



Viva Ceramica

VIVA LIMITED EDITION is a new collection of floor coverings with exclusive distribution. The collection includes MAXI floor tiles: 12mm glazed, color-through, very large sized porcelain tile with graphics reminiscent of wood.

www.cerviva.it

| Circle Reader Service #182

Counter Support Brackets

10 Specialties



Rangine Corporation / Rakks

Rangine Corporation's counter support brackets provide an easy-to-install alternative to full-height laminated panels. Available in a range of sizes to support counters up to 30-in.-deep, brackets install easily into studs or blocking and can support loads up to 450-lb. Less expensive than laminated supports, they increase open space while improving handicapped access and ergonomics. Brackets can be ordered in either surface or flush mounted configurations to provide heavy-duty unobtrusive support. Manufactured of extruded structural aluminum.

508-376-4545
www.rakks.com

| Circle Reader Service #185

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

TO ADVERTISE: Contact Deidre Allen
T: (212) 904-2010 / F: (609) 426-7136
deidre_allen@McGraw-Hill.com

Dual-Sided Filing Cabinet

12 Furnishings



Aurora from Richards-Wilcox, Inc.

Aurora Products introduces the 2-Tier Times-2, a new twist on storage and filing. At only 29.5-in. high, the 2-Tier Times-2 is a perfect desk companion, providing dual-sided filing in a locking cabinet that rotates. The Times-2 is small, but mighty: it holds as much as one 4-drawer 30-in. lateral file in a footprint that's just 36-in. wide by 25-in. deep. A variety of accessories accommodate all types of multimedia storage and filing. Use the 2-Tier for personal storage and filing, or between two work stations for shared filing. Email sniemiec@richardswilcox.com

800-877-8456
www.timestwo.com

Circle Reader Service #186

Innovative Lighting

16 Electrical



Engineered Lighting Products

The "Hole In The Wall" goes small! The newest member of the "HITW" family has a 4-in. by 5-5/8-in. aperture opening. The durable GRG cast housing once installed becomes one with the wall appearing as a custom formed drywall 'light niche.' Available in either LED or low wattage incandescent light sources.

626-579-0943
www.elplighting.com

Circle Reader Service #189

Curved Church Pews

12 Furnishings



New Holland Church Furniture

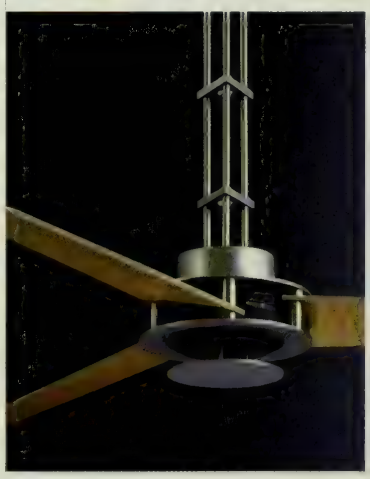
Curved pews are "Round For A Reason"™ and are designed and manufactured by New Holland Church Furniture. Curved pews are designed for maximum seating, curved for efficient use of space, designed to enhance worship, created for community, uniting the family of God. New Holland Church Furniture is a certified member of the Architectural Woodwork Institute (AWI), so you can be assured of the very highest quality. Email nhcw@newhollandwood.com

800-220-1465
www.newhollandwood.com

Circle Reader Service #187

Architectural Ceiling Fans & Lighting

16 Electrical



G Squared

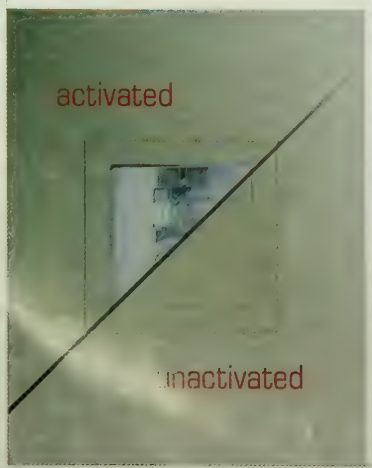
Balanced design that pleases the eye, and creates a mood and a gentle breeze. Moving sculpture: The San Francisco ceiling fan, a GOOD DESIGN Award winner. Whisper quiet, powerful and beautifully made, this timeless design can be used on 8-ft. ceilings or on cathedral ceilings with optional downrods up to 6-ft. long. Suitable for sloped ceilings up to 29 degrees. Lifetime warranty. To buy high-design architectural fans and lighting please visit G Squared's website or call between 7 A.M. and 6 P.M. PST.

877-858-5333
www.g2art.com

Circle Reader Service #190

Customized Emergency Lighting

16 Electrical



Concealite Life Safety Products

Artistry and architecture merge when designers incorporate Concealite's 5000 Series into their interiors. The 5000 Series can be customized to fit any interior color or texture. Whether your walls are painted with hard-to-match color, unique wallpaper, rustic wood grains, or a combination, Concealite can customize the frame and panel of each 5000 emergency light to blend into its surroundings and complete the look of your space while still meeting all of the emergency lighting requirements. For more information, please visit their Web site.

www.concealite.com

Circle Reader Service #188

Sign Lights

16 Electrical



Primelite Manufacturing Corp.

These all-aluminum construction Sign Lights can be used indoors or outdoors. Sign Lights are available in incandescent or in energy efficient lighting like Metal Halide, High Pressure Sodium or high wattage PL's. Choose from 22 standard colors or select custom color matching. Arms for the Sign Lights can be fabricated to the customer's own unique design. In addition to Sign Lighting, Primelite carries a full line of prismatic fixtures, cast posts, wood posts, postlights, Cast Aluminum Lanterns, garden lights, street lighting, faux alabaster lighting, Hi hat extenders and blank up kits.

800-327-7583
Primelite-mfg.com

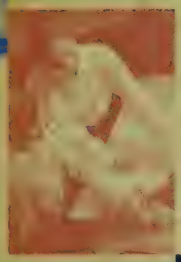
Circle Reader Service #191

CIRCLE # ON READER SERVICE CARD OR GO TO HTTP://ARCHRECORD.CONSTRUCTION.COM/READERSERVICE/READERSERVICE.ASPX

What are Architects earning?

What are firms paying?





FIND THE ANSWERS in the new **AIA Compensation Report**—the most comprehensive source of compensation information in the architecture industry. No other survey covers such a wide range of positions and geographic scope. You'll find up-to-date information on compensation levels and benefits for over 35 positions inside architecture firms.

The survey is available in print or electronic PDF. In PDF, you can also buy any of the regional tables, which include states and metro data for each region.

AVAILABLE JULY 2005



AIA

2005 AIA Compensation Report:
A Survey of U.S. Architecture Firms

For information, please visit
www.aia.org/econ_reports.

AIA BOOKSTORE | 1735 NEW YORK AVENUE, NW | WASHINGTON, DC 20006



THE BUSINESS OF ARCHITECTURE: 2003 AIA FIRM SURVEY

→ Access the latest, most comprehensive information on today's architecture marketplace

The Business of Architecture is the most reliable source of information on the business practices of U.S. architects. Responses from architecture firms nationwide have been compiled to bring you the latest financial benchmarks and management strategies of AIA-member-owned firms.

Major topics include: financial performance, services and sectors, marketing spending, professional liability, technology investment, and international practice.

This report organizes findings by region and firm size and includes charts and tables for fast, easy access to the information you need to stay competitive.

→ Visit *www.aia.org/econ_reports*

→ To order your copy, go to *aia.org* and click on AIA Store or call 800–365–2724.

AIA members:
$125/PDF, $150/book
Retail: $329

Diane Sorsten@McGraw-Hill.com

POSITIONS AVAILABLE

SENIOR ARCHITECT AND PROJECT MANAGER

Deutsch Associates, a professional architectural design firm, has an immediate opening for a Senior Architect and Project Manager. Applicant should have a minimum of 5+ years professional experience with Bachelors degree in architecture. Diversified experience in project management, mentoring of technical staff and strong client interaction capabilities. Requirements: Arizona registration; Contact: send resume to HR@ 2929.com or fax to 602-840-6646; Firm info: Deutsch Associates is a Phoenix-based architectural design firm providing services to both public and private sector clients since 1981. Market sectors include: government, education, high tech, bio, industrial, and retail.

ARCHITECTS - ALL LEVELS / ALL SPECIALTIES

JR Walters Resources, Inc. specializing in the placement of technical professionals in the A&E field. Openings nationwide. Address: P.O. Box 617, St. Joseph, MI 49085 Tel: 269-925-3940 E-mail: jrwawa@jrwalters.com VISIT our web site at www.jrwalters.com

ARCHITECTURAL DESIGNER

McKently + Asso. is in need of an Architectural Designer. B.S. Architecture + 2 yrs. Work related exp. Please send resume to: 234 E. Colorado Blvd.; Ste. #725; Pasadena, CA.91101 Attn: Ken McKently

ARCHITECTURAL DESIGNER

B.S. in Architecture/Engineering. Send resume to: Architecture West, Inc., 2908 Nebraska Ave., Santa Monica, CA 90404 Attn: Mr. Mikaelian

ARCHITECT

Bachelor's degree in Architecture; $28,350/yr.; 40 hr/wk in Reston, VA. Send Resume to Ms. Kunze, SHW Group, LLP, 4000 McEwen Road North, Dallas, TX 75244

WWW.SMPSCAREERCENTER.ORG

Find marketing/BD professionals with A/E/C exper. Call 800-292-7677, ext. 231.

archrecord.construction.com

BUSINESS OPPORTUNITIES

INTERIOR ARCHITECTURE

San Francisco area commercial interiors firm established in 1988 with a solid book of repeat clientele plus many emerging opportunities. Owner is looking toward reduced involvement over the next 5 to 8 years and seeks a licensed individual architect, or firm, for exploring the mutual goal of a gradual ownership transition. Send Inquiries to: iagamedes@yahoo.com

OPPORTUNITY TO CONTINUE FIRM

Arch. Firm Est. 84. Owners nearing retirement seeking smooth ownership transition. 80% repeat clientele in education, public, industrial and institutional sectors. P.O. Box 5358, Scottsdale, AZ 85261-5358.

PART OWNERSHIP AVAILABLE

In Engineering, Architectural, Environmental, Design-Build Firms in several US Cities. For details send your resume to: Rogier Associates, 1111 East 54th Street, Indianapolis, IN 46220. (317) 257-8200. Phone number ran incorrectly in the 07/05 AR issue.

OFFICIAL PROPOSAL

CITY OF ONTARIO HOUSING AGENCY QUIET HOME PROGRAM REQUEST FOR STATEMENTS OF QUALIFICATIONS & REQUEST FOR PROPOSALS PROFESSIONAL ARCHITECTURAL, ENGINEERING AND ACOUSTICAL SERVICES FOR NEW RESIDENTIAL SOUND INSULATION PROJECT

Notice is hereby given that the Housing Agency of the City of Ontario, California, will receive no later than 4:30 p.m. on Wednesday, August 31, 2005, Request for Statements of Qualifications (RFQ) and Request for Proposals (RFP) for professional architectural, engineering and acoustical services for a new residential sound insulation project. The project will consist of soundproofing approximately 140 dwellings near Ontario International Airport. Included are single family detached homes, duplexes and multi-family structures. Typical improvements include the installation of acoustical windows and doors, attic insulation, central heating, ventilation and air conditioning systems, etc. The consultant's general scope of work consists of: conducting architectural surveys, preparing thorough building deficiencies assessment reports, preparation of construction cost estimates and bid documents, construction management, pre- and post-construction noise testing and reporting, etc. The estimated construction cost is about $3.5 million. Qualified consultants must be familiar with FAA, local and State of California standards and requirements for similar types of projects. The FAA and Los Angeles World Airports will fund the project. Because of a significant number of Spanish-speaking participants, it is essential that the selected consultant have staff members who are fluent in Spanish, assigned directly to the project. Each response must conform to the Agency's Request for RFQ/RFP document. Copies of the RFQ/RFP document may be obtained by fax request to the Ontario Housing Agency at (909) 395-2288 or by calling Jorge Villanueva at (909) 395-2302. Small, Minority and Women-owned businesses are encouraged to respond. City of Ontario, Housing Agency Quiet Home Program, Jorge L. Villanueva, Senior Project Coordinator, (909) 395-2302

SPECIAL SERVICES

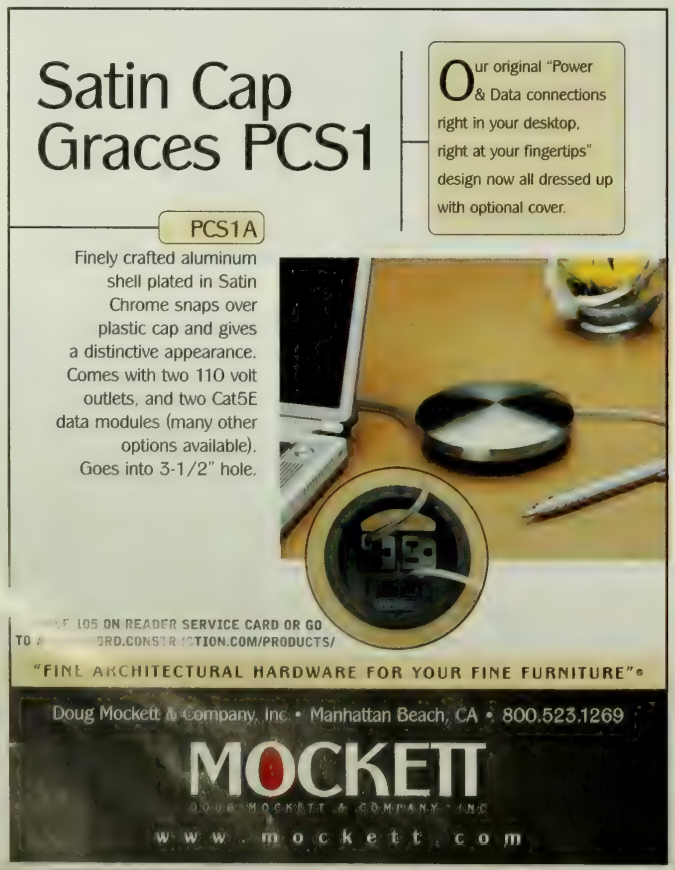
3-D MODELING / DIGITIZING SERVICES

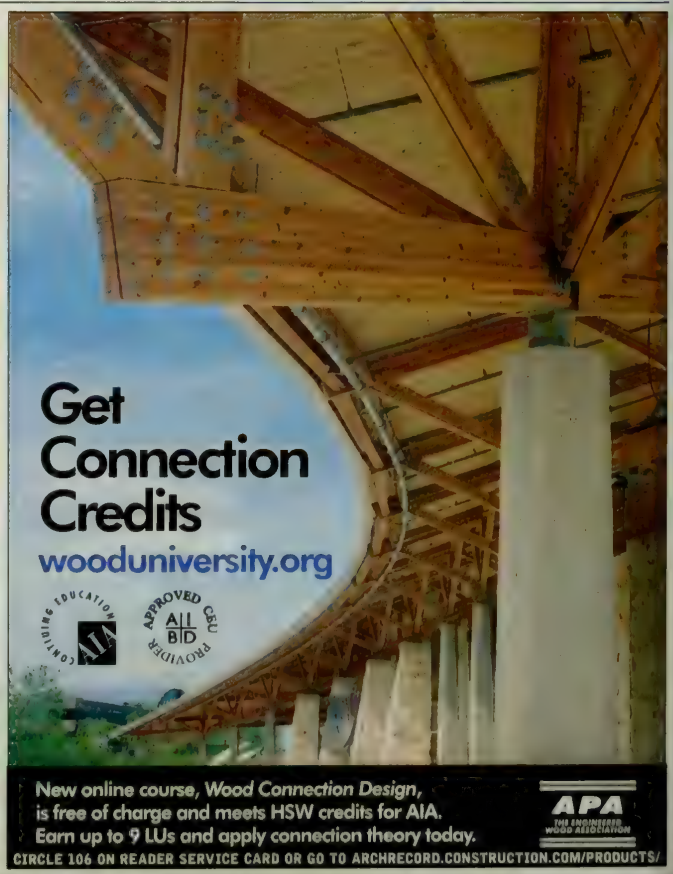
3-D period details to full structure or site www.masterwerkes.com 214-315-6479

CNC WOODCARVING / PRODUCTION

No limits on complexity or size www.masterwerkes.com 214-315-6479







The American Institute of Architects

honor awards 2006



call for entries

architecture
ENTRY DEADLINE: August 5, 2005
SUBMISSION DEADLINE: September 2, 2005

interior architecture
ENTRY DEADLINE: August 19, 2005
SUBMISSION DEADLINE: September 16, 2005

regional & urban design
ENTRY DEADLINE: September 9, 2005
SUBMISSION DEADLINE: October 7, 2005

the twenty-five year award
SUBMISSION DEADLINE: September 2, 2005

For more information, go to
www.aia.org/nationalawards.

Celebrating the best in contemporary American architecture.

AIA

Yale Center for British Art, New Haven, Connecticut; architect: Louis I. Kahn, FAIA; completed by Pellecchia & Meyers; photo by Richard Caspole, courtesy of the Yale Center for British Art

150	56		3form *3-form.com*	
37	22		Academy of Art University *academyart.edu*	
200	90		Adams Rite Manufacturing Co *adamsrite.com*	
10-11	7		Adobe *adobe.com*	
150	57	S	Advance Lifts *advancelifts.com*	
227			AIA *aia.org*	
225			AIA *aia.org*	
225			AIA *aia.org*	
16	9	S	Alcan Composites USA Inc *alucobond.com**	
22	12	S	Alcoa Architectural Products *alcoacladdingsystems.com*	
183	76		ALKCO *alkco.com*	
226	106		APA: The Engineered Wood Assn *glulambeams.org*	
202	93		Arakawa Hanging Systems *arakawagrip.com*	
176	69		Architectural Area Lighting *aal.net*	
183	77		Architectural Details *arch-details.com*	
14			Architectural Record *archrecord.construction.com*	
75	43		Architectural Woodwork Institute *awinet.org*	
cov2-1	1	S	Armstrong *armstrong.com*	
12			Audi *audiusa.com*	
39	24		B-K Lighting *bklighting.com*	
65	149		BEGA *bega-us.com*	
199	89	S	Belden Brick Company, The *beldenbrick.com*	
210			BNi Building News *bnibooks.com*	
213	100		Boyd Lighting *lightspacebyboyd.com*	
212	99		Boyd Lighting *lightspacebyboyd.com*	
38	23		Building Systems Design *bsdsoftlink.com*	
216			Cascade Coil Drapery *cascadecoil.com*	
73	42	S	CENTRIA Architectural Systems *centria.com*	
209	97		Clayton *claytonco.com*	
46	30		CNA/Victor O Schinnerer & Co Inc *schinnerer.com*	
171	66		Cooper Lighting *cooperlighting.com*	
71	41	S	Cornell Iron Works *cornelliron.com*	
180	71	S	CPI International *cpidaylighting.com*	
185	79		CSi Metal Dek Group *metaldek.com*	
152	86		Custom Building Products *custombuildingproducts.com*	
198	88		Dawson Doors *dawsondoors.com*	
cov-3			Dell *dell.com*	
181	73		Delray Lighting Incorporated *delraylighting.com*	
201	91		Dornbracht *dornbracht*	
226	105		Doug Mockett & Company Inc *mockett.com*	
216	103		Doug Mockett & Company Inc *mockett.com*	
18	10		Dow Corning *dowcorning.com*	
153	60	S	DuPont Corian *corian.com*	
137	50	S	DuPont Tyvek *tyvek.com*	
78	45	S	EFCO Corporation *efcocorp.com*	
32	17		Ellison Bronze *ellison-bronze.com*	
33	18		Ellison Bronze *ellison-bronze.com*	
52	33		Energy Steel Products *energysteelproducts.com*	
44	28	S	Fypon *fypon.com*	
166-167	65		Gardco Lighting *sitelighting.com*	
80A-B		S	Georgia-Pacific Commercial *gp-enmotion.com*	
208A-D			Gypsum Association *gypsum.org*	
202	92	S	Hafele *hafeleonline.com*	
cov-4	110	S	Haworth *haworth.com*	
66	39		HDR *hdrinc.com*	
79	46	S	High Concrete Structures Inc *highconcrete.com*	
40	25	S	Huntco *huntco.com*	
151	58		HY-Lite *hy-lite.com*	
182	74		In-O-Vate Technologies Inc *dryerbox.com*	
50	32	S	Indiana Limestone Company *indianalimestonecompany.com*	
48-49	31	S	InterEdge Technologies *firesafe-glass.com*	
229	107	S	Invisible Structures Inc *invisiblestructures.com*	
154	61		Ivalo Lighting Incorporated *ivalolighting.com*	
42	26	S	Kalwall *kalwall.com*	
41		S	Kawneer Company Inc *kawneer.com*	
229	108		Kepco+ Incorporated *kepcoplus.com*	
77	44	S	KI *ki.com*	
29	15		Kim Lighting *kimlighting.com*	
211	98		KraftMaid Cabinetry *kraftmaid.com*	
4	3	S	Kusser Aicha Graniteworks USA *kusserUSA.com*	
184	78		@Last Software *sketchup.com*	
59	38	S	Laticrete International Inc *laticrete.com*	
183	75		LightingUniverse.com *lightinguniverse.com*	
163	63		Lightolier *lightolier.com*	
193	83		Llumar Window Film *llumar.com*	
57	36		Lucifer Lighting Company *luciferlighting.com*	
8-9	6	S	Lutron *lutron.com*	
179	70	S	Lutron *lutron.com*	
215	101	S	Major Industries *majorskylights.com*	
67	40	S	MBCI *mbci.com*	
80			McGraw-Hill Construction *construction.com*	
208			McGraw-Hill Construction *construction.com*	
2-3	2		Metal Initiative, The *themetalinitiative.com*	
197	87		Mitsubishi Chemical America Inc *alpolic-usa.com**	
34	19	S	Mortar Net *mortarnet.com*	
214			National Building Museum *nbm.org*	
145	53	S	National Gypsum Company *nationalgypsum.com*	
186	80	S	National Terrazzo & Mosaic Assn *ntma.com*	
35	20		NBK Keramik *nbk.de*	
204	94		Neoporte Modern Door *neoporte.com*	
31	16		Nevamar Decorative Surfaces *nevamar.com*	
207	95		NJ SmartStart Buildings *njsmartstartbuildings.com*	
215	102		Nova Distinctive Floors *nonafloorings.com*	
173	67		Original Cast Lighting, The *theocl.com*	
138	51	S	Pilkington *pilkington.com*	
115	48	S	Pittsburgh Corning *pittsburghcorning.com*	
148	55		Portland Cement Association *cement.org*	
174-175	68		Prescolite *prescolite.com*	
159	62		Prudential Lighting *prulite.com*	
181	72		Quilite *quilite.com*	
189	81		Robinson Brick Company *robinsonbrick.com*	
114	47	S	Roppe Corporation *roppe.com*	
190	82		Roseburg Forest Products *rfpco.com*	
147	54	S	SAFTI/O'Keeffes Inc *safti.com*	
53	34		Samsung Staron *getstaron.com*	
15	8	S	Schott Corporation *us.schott.com*	
54	35	S	Sherwin-Williams *sherwin-williams.com*	
116	49	S	Simpson Strong-Tie Company Inc *simpsonstrongwall.com*	

For additional information on these advertisers, circle corresponding number on Reader Service Card, or go to archrecord.construction.com/products.
To reserve your 2005 Sweets call 1-800-442-2258

194	84		Skyline Design skydesign.com
27	14	ⓘ	Sloan Valve Company sloanvalve.com
196	86		Stone River Bronze stoneriverbronze.com
58	37	ⓘ	Taiyo Birdair taiyobirdair.com
5	4		Technical Glass Products fireglass.com
165	148		TEKA Illumination teka-illumination.com
25	13		Thermador thermador.com
217	104	ⓘ	Trespa trespanorthamerica.com
203			US Green Building Council greenbuildexpo.org
230	109	ⓘ	USG Corporation usg.com
207	96		Verizon Wireless verizonwireless.com
143	52		VETROTECH vetrotech.com
36	21		VT Industries vtindustries.com
20-21	11		Vulcraft, A Division of Nucor Corp nucor.com
195	85	ⓘ	Wausau Window and Wall Systems wausauwindow.com
6-7	5		Weather Shield Windows & Doors weathershield.com
43	27		Western Red Cedar Lumber Association realcedar.org
45	29	ⓘ	YKK AP America Inc ykkap.com

EXECUTIVE OFFICES

James H. McGraw, IV, Group Publisher
(212) 904-4048 Fax: (212) 904-3695
jay_mcgraw@mcgraw-hill.com

Laura Viscusi, VP, Associate Publisher
(212) 904-2518 Fax: (212) 904-2791
lviscusi@mcgraw-hill.com

Assistant: Pina Del Genio
(212) 904-6791 Fax: (212) 904-2791
pina_delgenio@mcgraw-hill.com

ONLINE SALES

Paul Cannella, Director
(312) 233-7499 Fax: (312) 233-7490
paul_cannella@mcgraw-hill.com

CLASSIFIED SALES

Diane Soister
(212) 904-2021 Fax: (212) 904-2074
diane_soister@mcgraw-hill.com

NORTHEAST / MID-ATLANTIC

Janet Kennedy (CT, MA, ME, NH, NJ, NY, PA, RI, VT)
(212) 904-3603 Fax: (212) 904-2791
janet_kennedy@mcgraw-hill.com

Joe Sosnowski (NJ, PA)
(610) 278-7829 Fax: (610) 278-0936
joseph_sosnowski@mcgraw-hill.com

MIDWEST

Mike Gilbert (AR, IL, IA, MN, MO, OH, W.PA, WV)
(312) 233-7401 Fax: (312) 233-7403
mike_gilbert@mcgraw-hill.com

Lisa Nelson (IL, IN, KS, MI, ND, NE, OK, SD, TX, WI)
(312) 233-7402 Fax: (312) 233-7403
lisa_nelson@mcgraw-hill.com

SOUTHEAST / MID-ATLANTIC

Susan Shepherd
(404) 843-4770 Fax: (404) 252-4056
sshepherd@mcgraw-hill.com

WEST (AZ, CA, CO, NM, NV)

Bill Hague
(253) 858-7575 Fax: (253) 858-7576
(760) 340-5575 Fax: (760) 340-0439
bill_hague@mcgraw-hill.com

WEST (ID, MT, OR, S.CA, UT, WA, WY)

Bill Madden
(503) 224-3799 Fax: (503) 224-3899
bill_madden@mcgraw-hill.com

INTERNATIONAL

Glen Wither (Canada)
(888) 836-6623 Fax: (866) 212-2213
glen_wither@mcgraw-hill.com

Martin Drueke (Germany)
(49) 202-27169-12 Fax: (49) 202-27169-20
drueke@intermediapartners.de

Ferruccio Silvera (Italy)
(39) 022-846716 Fax: (39) 022-893849
ferruccio@silvera.it

Katsuhiro Ishii (Japan)
(03) 5691-3335 Fax: (03) 5691-3336
amskatsu@dream.com

Young-Seoh Chin (Korea)
(822) 481-3411/3 Fax: (822) 481-3414

PRODUCT NEWS SPOTLIGHTS / POSTCARD SERVICE

Deidre Allen
(212) 904-2010 Fax: (609) 426-7136
deidre_allen@mcgraw-hill.com

SUBSCRIBER SERVICE

(888) 867-6395 (USA only)
(609) 426-7046 Fax: (609) 426-7087
p64cs@mcgraw-hill.com

BACK ISSUES

(212) 904-4635
phyllis_moody@mcgraw-hill.com

REPRINT MANAGEMENT SERVICES

(800) 360-5549 x129
architecturalrecord@reprintbuyer.com

Don't Do It Half-Grassed!



Grasspave2 (right) has 100% grass coverage, 5721 psi compressive strength, 92% void space for the healthiest root zone, and is made from 100% recycled plastic. Gravelpave2 (not shown) is beautiful too!

800-233-1510
invisiblestructures.com
Invisible Structures, Inc.

CIRCLE 107 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

KEPCO+ Architectural Cladding Systems



90 West Restoration

NYC, NY

Englishman's Bay Granite

classic details modern installation

1985-2005 celebrating 20 years

www.kepcoplus.com

CIRCLE 108 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



Dramatic expanses always intensify the beauty.



True™ Acoustical Ceiling Panels

Subtle. Soft. Serene. True™ Acoustical Ceiling Panels from USG are designed with a minimal grid reveal that creates stunning monolithic beauty to dramatize other design elements in the room. And with enhanced acoustical performance, the ceiling is as quieting as it is attractive. For more inspiration, visit www.usg.com or call 877 USG.4200.

USG

©2005, USG Corporation ©iconica/Andre Gallant 2005, all rights reserved

CIRCLE 109 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/



From the pages of ARCHITECTURAL RECORD 1966

Bunshaft Villa Nears Its End

By James S. Russell, AIA



Gordon Bunshaft was at the height of his powers in 1963, when he designed an elegant weekend pavilion at the edge of Georgica Pond in East Hampton, a seaside village about 100 miles from New York City. A partner at Skidmore, Owings & Merrill, his work on projects like the Emhart Corporation, in Bloomfield, Connecticut, and the IBM headquarters, in Armonk, New York, defined a technologically progressive image of the American corporation as it relocated to lush suburbs.

The house Bunshaft built for himself and his wife, Nina, reflected ideas he was working out in corporate and institutional projects. Massive concrete walls faced in travertine marble supported 5-foot-wide, precast-concrete double-T beams. A broad glass plane opened to a picturesque vista across the pond, dune, and crashing ocean waves in the distance. It was also, as RECORD noted in 1966, an ideal setting for the couple's art collection. "What was remarkable, absolutely amazing, was the ensemble," remarked Bunshaft biographer Carol Herselle Krinsky in an interview. Bedrooms at either end opened to outdoor rooms for sculpture. "Against bushy



In its heyday, the house appeared radiant, as shown from the pond side (previous page). For the living room (above), the Bunshafts commissioned a tapestry from Picasso, which presided over their art collection. In more recent times (below), the house has become derelict.



(continued from previous page) bushes, he placed a plump Miro. On the other side of the house, a little group of thin birch trees rose behind a thin Giacometti."

Gordon died in 1990, and Nina later willed the property, including its collection, to the Museum of Modern Art, which removed the art and, in 1994, sold the house to decorating doyenne Martha Stewart. She gutted the place in anticipation of a remodel by London architect John Pawson, but put it up for sale when her legal problems mounted. Listed in 2003 at $10.5 million, the 2,400-square-foot structure did not attract buyers in a community that now favors getaways five times the size. This spring, Palm Beach, Florida–based textile magnate Donald Maharam and his wife, Bonnie, bought it for a sum reportedly near $9 million.

The Maharams intend to demolish the house and rebuild on its footprint. "To restore the house would mean rebuilding it," explained David Pill, of Winchester, Massachusetts, the Maharam's architect (and son-in-law), citing extensive foundation problems. The pending demolition looks certain, and comes only a short time after Emhart was bulldozed.

"Of course, it's a bad idea to take it down," commented Krinsky. Since it was conceived as an ensemble of art and architecture, however, the house alone, she added, "is far less valuable, I regret to say." The Maharams have rejected the creation of a Bunshaft "facsimile," says Pill. The new design "will be a Modern house with quite a lot of glass, and it will be low." Equaling the significance of the Bunshaft house is not Pill's primary agenda. "I'm trying to create a nice piece of architecture for my clients," he responded. "It will be what it is." ■

Work without boundaries.
Create without boundaries.





Dell recommends Microsoft® Windows® XP Professional

obe® Video Collection Standard
ware, documentation or
aging may vary from retail version

y goodbye to creative constraints. Dell™ and Adobe® have joined forces to help provide solutions for your creative needs. Dell Precision™ workstations feature the latest el® processors, loads of memory, and PCI Express™ x16 2-D and 3-D graphics cards, making them powerful enough to handle large graphics files quickly and deliver stunning visual ects. Best of all, Adobe has a range of Dell ISV-certified software options, including the comprehensive Adobe® Video Collection 2.5 Standard. Simple solutions, so all you have do is be creative. **Limited time offers.**

DELL PRECISION™ 470 WORKSTATION

Scalable, Dual Processor Capable Workstation
- Intel® Xeon™ Processor (2.80GHz, 1MB Cache, 800MHz FSB)
- Microsoft® Windows® XP Professional
- 1GB Dual-Channel DDR2 SDRAM
- 160GB* (7200 RPM) SATA Hard Drive
- 128MB ATI FireGL™ V3100 PCI Express™ x16 Graphics Card
- 48x CD Burner/DVD Combo Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* On-Site Service,* Tech Support)
- Monitor Not Included

$1699 Lease as low as **$45**/mo. (48 pmts*)
E-VALUE Code: 04751-S40716m

Recommended Upgrades:
- 3-Yr Business Essential Service Plan (includes 24x7 Same-Day On-Site Service,* advanced Tech Support), add $408
- Dell™ UltraSharp™ 1905FP 19" Flat Panel Display, add $499

DELL PRECISION™ M20 WORKSTATION

Workstation Performance, Notebook Mobility
- Featuring Intel® Centrino™ Mobile Technology with Intel® Pentium® M Processor 730 (1.60GHz, 2MB L2 Cache, 533MHz FSB); Intel® PRO/Wireless Card
- Microsoft® Windows® XP Professional
- 14.1" SXGA+ Active Matrix Display
- 512MB DDR2 SDRAM
- 60GB* (7200 RPM) Hard Drive
- ATI Mobility™ FireGL™ V3100 64MB PCI Express™ OpenGL Graphics
- 8x DVD-ROM Drive
- 3-Yr Economy Service Plan (Ltd. Warranty,* Tech Support)

$1999 Lease as low as **$53**/mo. (48 pmts*)
E-VALUE Code: 04751-S40719m

Recommended Upgrades:
- 80GB* (5400 RPM) Hard Drive, add $30
- 3-Yr Business Standard Service Plan (includes On-Site Service,* CompleteCare™ Accidental Damage Service,* advanced Tech Support), add $278

Dell recommends Adobe® software with Dell Precision™ workstations.

Adobe® Video Collection 2.5 Standard

- Package includes Adobe Premiere® Pro 1.5, Adobe After Effects® 6.5 Standard, Adobe Audition™ 1.5, and Adobe Encore™ DVD 1.5.

Special offer only with purchase of select Dell Precision™ Workstations*
Only **$599** Great Value!

Adobe® Photoshop® CS2
Operate with powerful, next-generation digital imaging features that are the professional standard for graphic and web designers, photographers, and video professionals.
$589 SKU A0472798

Adobe® After Effects® 6.5
Add stunning 2D and 3D compositing, animation, and visual effects as well as motion tracking and stabilization to production.
Standard Version
$728 SKU A0369456

Adobe® Premiere® Pro 1.5
Revolutionizes non-linear video editing with real-time tools that provide precise management of virtually every aspect of video and audio editing.
$729 SKU A0356041

FREE 3-5 Day Shipping* with purchase of select business systems. For a limited time only. Call or go online for eligible systems.

dobe

Get more out of creativity. Get more out of now. DELL

CALL 888.691.8169 toll free **CLICK www.dell.com/SMB/PrecisionHD**

l: M-F 7a-8p Sat 8a-5p, CT

ricing/Availability: Pricing, specifications, availability, and terms of offer may change without notice. Taxes, fees and shipping and handling charges, except for free shipping offer, are extra, vary, and not subject to discount. Offers may be combined with other select offers, iscounts. U.S. Dell Small Business new purchases only. LIMIT 5 DISCOUNTED OR PROMOTIONAL ITEMS PER CUSTOMER. In case of customers leasing under these promotions, please note that items leased will be subject to applicable [illegible] requirements. l cannot be responsible for pricing or other errors, and reserves the right to cancel orders arising from such errors. **Workstation Offer:** Excludes n series. **Warranty:** For a copy of our Guarantees or Limited Warranties, write Dell USA L.P., Attn: Warranties, One Dell Way, and Rock, Texas 78682. For more information, visit http://www.dell.com/warranty. **On-Site Service:** Service may be provided by third-party. Technician will be dispatched, if necessary, following phone-based troubleshooting. Subject to [illegible] geographical trictions and terms of service contract. Service timing dependent upon time of day call placed to Dell. **Leasing:** Monthly payment based on 48-month Fair Market Value ("FMV") QuickLease and does not include taxes, fees and shipping and handling charges. Credit[illegible] ment may vary, depending on your creditworthiness. QuickLease arranged by Dell Financial Services L.P. ("DFS"), an independent entity, to qualified Small Business customers. Minimum transaction size of $500 required. At the end of the [illegible] equipment for the then FMV, renew the lease or return the equipment to DFS. Please contact your DFS representative for further details. All terms subject to credit approval and availability, and are subject to change without notice. **CompleteCare Accidental Damage rvice:** CompleteCare service excludes theft, loss, and damage due to fire or intentional damage. CompleteCare not available in all states. Customer may be required to return unit to Dell. For complete details, visit www.dell.com/servicecontracts. **Hard Drive:** es, GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment and will be less. **Free 3-5 Day Shipping:** Free shipping is lowest cost (3-5 day) shipping. Valid for U.S. Small Business new purchases only. Available [illegible] cept Alaska) U.S. only. To qualify for free shipping, minimum purchase thresholds may apply. Call or go online for details. Systems free shipping offers exclude Software and Peripheral (S&P) orders under $59; all S&P orders placed by phone and by [illegible] tems configurator pages. S&P free shipping offers apply to S&P orders purchased in the S&P Online store and/or by phone. Free shipping on S&P does not apply to S&P in the online system configuration pages, but can be combined with other offers. **Trademark/Copyright tices:** Dell, the stylized E logo, E-Value, UltraSharp, CompleteCare and Dell Precision are trademarks of Dell Inc. Intel, Intel Centrino, Intel Xeon and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other ntries. Microsoft and Windows are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Adobe, the Adobe Logo and Acrobat are either registered trademarks or trademarks of Adobe Systems Incorporated in the United tes and/or other countries. ©2005 Dell Inc. All rights reserved



HAWORTH®
change by design

www.haworth.com 866.833.4343

CIRCLE 110 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/